ARE YOU A GOOD WITCH OR A BAD WITCH? THE IMPORTANCE OF OBJECT RELATIONS IN MODERN ASSESSMENT

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The Social Cognition and Object Relations Scale—Global (SCORS-G) is a relatively new scoring system for the Thematic Apperception Test (TAT) that provides information about an individual's functioning in a variety of domains, including intrapsychic and interpersonal. Participants in this archival study had been administered a variety of measures as part of a routine clinical assessment, including the TAT, Rorschach, Minnesota Multiphasic Personality Inventory-2, and the Wechsler Adult Intelligence Scale. Selected TAT stories were rescored using current SCORS-G scoring criteria. This dissertation evaluated the factor structure of the SCORS-G in an outpatient sample with a principal component analysis (PCA), finding support for a two-component solution. The SCORS-G was then compared to well-established measures of personality functioning, social cognition, and object relations using correlational analyses, with mixed results. Lastly, support was found for using the SCORS-G as a tool for discriminating individuals with a history of violent or problematic relationships from those without such a history. Implications for card selection based on card pull and the impact of bland protocols were explored.

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CHAPTER 1

INTRODUCTION

> *The greatest need of a child is to obtain conclusive assurance (a) that he is genuinely loved by his parents, and (b) that his parents genuinely accept his love … Frustration of his desire to be loved and to have his love accepted is the greatest trauma that a child can experience; and indeed this is the only trauma that really matters…*
>
> W. R. D. Fairbairn

"Are you a good witch or a bad witch?" When Dorothy landed in Oz, this was the question that greeted her. Having suffered under the tyranny of a "bad" witch, the Ozians quickly confronted Dorothy with this simple question to ascertain whether they should embrace her or fear her. Once having Dorothy's answer, the citizens of Oz would to use their past experiences of witches to inform their future interactions with this new stranger who had landed unexpectedly in their midst.

The Ozians' question is illustrative of an important aspect of human relationships. That is, we all use past relationships and experiences to inform our expectations of current relationships. If we did not, we would enter into new relationships without a clear sense of how to ensure our own safety, how to maintain our boundaries, or how to recognize who has the potential to be a positive or negative influence in our lives. Without this internal guidance system, relationships would be chaotic and unpredictable. In fact, many of us enter into the mental health system after our interactions and experiences with others have been less than positive. Likewise, the issues patients bring into therapy often relate to the quality of the relationships they have with others (Morey, 2017). Unlike the Ozians, many patients struggle to identify and related to the good and bad 'witches' in their lives.

Psychodynamically-informed psychological assessments allow us to understand the nature of our patients' relationships, including those relationships that have had a fundamental

influence on how patients perceive themselves and others. These assessments provide a picture of who patients are and why they might be experiencing affective or relational distress. The value of this type of assessment goes far beyond clarifying a patient's diagnosis to providing a road map for treatment and recovery that is tailored to the patient's individual strengths, weaknesses, and character (Bram & Peebles, 2014).

Unfortunately, assessments of this type appear to be losing their value in some circles (American Psychological Association Division 12 Presidential Task Force, 1999; Bram, 2014). Measures typically used in these assessments, including the Rorschach Ink Blots and Thematic Apperception Test (TAT), have been described as having "limited merit" (Hunsley, Lee, & Wood, 2003). However, there is current research to support the continued use of psychoanalytic assessments and performance-based personality measures (Board of Trustees of the Society for Personality Assessment, 2005; Bornstein, 2017; Bram, 2014; Gacono & Evans, 2008; Hopwood & Bornstein, 2014; Meyer, 2004; Meyer & Archer, 2001; Meyer et al., 2002; Mihura et al., 2013; Stein et al., 2012; Viglione, 1999; Viglione & Hilsenroth, 2001). In his 2014 paper, Bram stressed the need for continued published research on performance-based personality measures to address efforts to eliminate training in them. This paper served as a wake-up call to psychodynamically-oriented assessors and researchers to continue to build the literature of evidence in support of these assessment measures and methods. This dissertation is intended to be one answer to that call.

In this dissertation, I explore the merits of object relations approaches to understanding how one functions in relationships, as well as investigate the nature and utility of one particular object relations assessment scoring system: the Social Cognition and Object Relations Scale—Global Rating Method (SCORS-G, *4th ed.*; Stein, Hilsenroth, Slavin-Mumford, & Pinsker, 2011)

as applied to TAT stories. I first provide a brief review of the work of some of the major contributors to object relations theories, including object relations perspectives on interpersonal relationships and trauma. After a brief overview of the various object relations measures available, two measures, the SCORS-G and the Mutuality of Autonomy Scale (MOA; Urist, 1977), are examined in detail. The existing research on the underlying components of the SCORS-G is explored, in addition to how this measure correlates with measures of psychopathology, personality, and cognition. Next, I propose hypotheses about how the SCORS-G will correlate with MOA and measures of psychopathology and social cognition. I also examine whether SCORS-G factors can discriminate patients with a history of relationship violence from those without a history of relationship violence. Thus, this dissertation not only serves to answer Bram's (2014) request for more research on performance-based measures of object relations, but also demonstrates the utility of these measures in clinical work, especially with patients who have a history of relational turmoil. Assessing object relations in victimizers and victims of relationship violence allows clinicians to take a compassionate and understanding look at these populations in a way that may illuminate avenues for effective intervention.

Object Relations Theories of Normal Development and Psychopathology

An appreciation for object relations information in assessment must begin with an understanding of major object relations theories. In broad terms, the basis of all object relations theories is the idea that an individual's early relationships have a significant, continuing impact on that person throughout the lifespan. The theory posits that as infants, we initially only take in and appreciate parts of people (part-objects), rather than being able to appreciate whole, separate individuals. Infants learn to associate the breast with nurturance and the positive feeling of being fed. Although infants cannot distinguish themselves from others at first, as they mature they

eventually develop boundaries that help them separate self from other. The relationships they form, first with part-objects and then with whole-objects, help them to appreciate others as whole, integrated people with different perspectives, desires, and needs than they may have. In turn, young children also use relationships to understand themselves as individuals. If this process occurs successfully, individuals are able to create mature, mutually-satisfying, reciprocal relationships with others. They are also able to distinguish their views, perspectives, and feelings from those of others. However, when this process goes awry, it sets the stage for psychopathology and relational problems.

Melanie Klein

Object relations theories can trace their roots back to Melanie Klein, the famous British child psychoanalyst. In a break from Freudian theory, which stressed the importance of the father in the development of the psyche, Klein focused on the importance the mother plays in the psychological development of her child. In fact, Klein proposed that the mother-child relationship is of primary importance and forms the foundation for all other relationships (Klein, Heimann, Isaacs, & Riviere, 1952, p. 209, 243). Broadly, she wrote that children experience an inner struggle between good and bad that they project onto external objects, especially the mother. These objects are subsequently identified as good or bad objects, depending on the valence of the projection. Each child then takes in or introjects these objects, which help the child form a sense of self.

Klein was notable for many contributions to psychoanalytic theory, not the least of which was her contribution to the understanding of a child's psychic development. Klein et al. described young children as being unable to internalize the complexity of whole objects (e.g., the mother) early in development (1952). Rather, children initially internalize incomplete objects or

"part objects" (e.g., the breast), and Klein focused on the breast as the first part object with which a child meaningfully interacts. Rather than loving the breast as a source of nurturance, Klein wrote that a child's first urges towards the breast are aggressive and destructive in nature, which is similar to Freud's assertion that hate precedes love (1915, p. 139). Despite these aggressive urges, Klein noted that children experience conflicting feelings toward the breast, which may originate from their simultaneous aggressive feelings towards it and their dependence on it for nourishment.

The conflicting feelings children experience toward the breast is portrayed by Klein as a conflict between two "positions." The first position, Paranoid-Schizoid, represents the child's bad or destructive urges, whereas the second "Depressive" position represents the child's loving and affiliative urges. Klein (1935) proposed children are initially in the Paranoid-Schizoid position, so-called because children feel persecuted by their own aggression that they have projected onto external objects, such as the breast. Despite this paranoia, children also have good internal representations, including the "good breast" that nourishes and comforts them. These good internal representations are kept psychologically separate from the objects onto which children have projected their hate. That is, the idealized image of the "good breast" is kept psychologically separate from the image "bad breast," which is not there when children are hungry or need comforting. Between four and 13 months, Klein theorized that children can begin to internalize whole objects. When this occurs, children are said to be in the Depressive position, and they are able to appreciate good and bad qualities in the same person or object. Despite this developmental achievement, this position is called Depressive because it requires children to mourn the loss of the ideal, perfect, all good object (e.g., the "good breast") since they can now integrate good and bad. In this position, children have to come to terms with the

fact that perfection no longer exists; good will always be marred with some bad from now on. In other words, the same breast that nourishes and comforts can also deprive.

In addition to Klein's descriptions of children's psychic developmental achievements, she described the impact that internalized objects have on their psychological health. For example, she theorized that bad internalized objects are said to cause "persecutory anxiety" and fears of annihilation. Good objects, on the other hand, are said to potentially provoke feelings of guilt. This is particularly the case if the child has had destructive urges toward the good object. Klein wrote that the type of object children first internalize influences their outlook and expectations of the world. For example, if a child first internalizes a good breast, the world is seen by the child as a nourishing, supportive, protective place. If a bad breast is initially internalized, the child will subsequently expect the world to be malevolent and withholding.

Klein's contributions to psychodynamic theory laid the foundation upon which other object relations theorists could build. She stressed that the objects a child internalizes guide the child's expectations of the world, as well as the child's feelings about the world. Thus, Melanie Klein drew our attention to the role of early relationships in psychic development. Her writing set the stage for understanding that the seeds for volatile relationships (i.e., internalizing bad objects) can be sewn early on in one's life. Later theorists, including W. R. D. Fairbairn, expanded on her theories to explain how and why abusive relationships develop.

William Ronald Dodds (W. R. D.) Fairbairn

Similar to Klein, W. R. D. Fairbairn (1941) laid the groundwork for understanding the origins of abusive relationships by elaborating on the development of the psyche in children. He stressed the importance of the relationship a child has with his or her mother, as it is this relationship that forms a template for how the child relates to the world. In his work, Fairbairn

emphasized the importance of children's dependency on their mothers to their psychological development. Despite this dependency, he observed that mothers cannot be perfectly attentive to their children. This imperfection is frustrating to children, who are trying to understand their mothers and feel safe and secure. As a result, Fairbairn (1944/1952, p. 110) theorized children use "splitting" to cope with the fact that their mother has both good and bad qualities and the fact that they have no power to force the mother to always be good.

Fairbairn's theory suggests that young children use this primitive, yet sophisticated strategy of splitting to maintain their sense of stability and safety, even though they are completely dependent on their mothers. He wrote that children develop an inner world made up of different parts of their mother's personality, both good and bad (Fairbairn, 1944/1952, Chapter IV). They then focus their needs, vulnerabilities, and dependency on the "good mother" who is always reliable, and they keep the "good mother" psychologically separate from the "bad mother." This strategy of splitting objects into good and bad is then expanded to other objects in the child's internal world. Fairbairn's portrayal of splitting shares some similarities to Klein's Paranoid-Schizoid position, except that Fairbairn focused not on aggressive urges, but on dependency (i.e., I need to know my mother will take care of me.)

Rather than simply identifying splitting in children, Fairbairn's theory expands on Klein's theory by identifying the different types of objects that may be internalized. For example, the good mother object, or "Ideal Object" is nurturing and allows the child to feel valued, wanted, and loved. Fairbairn also identified two bad objects: (1) the "Exciting Object" that attracts the child, but never satisfies him, and (2) the "Rejecting Object" that leaves the child feeling unloved and unwanted (Fairbairn, 1944/1952, Chapter IV). While the Exciting Object leaves the child unsatisfied and deprived, the Rejecting Object leads to feelings of rage, shame, and self-dislike.

Fairbairn theorized that if the bad objects are most prominent in a child's life, they are repressed. However, they still negatively impact the child's behavior and lead to relational disturbance in the form of immature neediness and rage in interactions with others. Thus, early negative experiences with objects can have negative effects on future relationships, as rage may easily lead to relationship violence.

Fairbairn also expanded our understanding of *how* early experiences with objects can lead to troubled relationships later on. According to Lachkar (2004, p. 20), Fairbairn's work explains that patients may hold onto bad, painful internal objects from childhood. The feelings about the self that are inspired by the early internalized bad objects may lead us to identify with maltreatment by others. That is, we may have an external "abusive" romantic partner, but we may have chosen that partner because our "internal abuser" identifies with the partner's abusive behavior (Fairbairn, 1944/1952, Chapter I). Fairbairn's work suggests that internal objects such as the wronged self, the insatiable self, the craving self, the betrayed self, etc. identify with external objects that are rejecting, depriving, unavailable, withholding, painful, and sadistic. Thus, relationship trauma continues to be perpetuated as the individual continues to seek out external objects that are familiar to them. Understanding and being able to measure the quality of one's internal objects may reveal these critical relationship dynamics that lead individuals to 'seek out' abusive or violent relationships.

In addition to providing insight into a child's psychic development and proposing why individuals find themselves in violent relationships, Fairbairn's work highlighted the importance of repression for maintaining problematic relationship dynamics. He agreed with Freud that "the doctrine of repression is the foundation-stone upon which the whole structure of psycho-analysis rests" (in Collected Papers, 1, 1959, p. 297). Fairbairn abruptly departed from Freud, however,

when he asserted that repression functions to prevent awareness of "intolerably bad internalized objects," as opposed to "guilty impulses" or "intolerably unpleasant memories" (Fairbairn, 1943). The need for repression against bad objects, Fairbairn explained, is that children experience intense shame (not just overwhelming anxiety and discomfort) in response to bad objects. More recent researchers suggest that shame, the belief that one is bad and not worthy of love and connection with others, is a major obstacle to fostering joy, healthy relationships, and authenticity (Brown, 2010). The use of repression may prevent conscious awareness of shame, but it prevents individuals from directly addressing the origin of their problematic relationship dynamics. Thus, repression of bad objects, which defends against internalized Exciting and Rejecting Objects, may protect individuals from the distress of conscious awareness of their internalized bad objects. However, it also prevents individuals from addressing the core fears that maintain their relationship dynamics: "I am bad," and "I am not worthy of love and connection." As a result, these maladaptive relationship dynamics persist.

Because Fairbairn explained why people stay in abusive relationships, it is no surprise that he was amongst the first in the psychoanalytic community to write about trauma. Fairbairn had considerable exposure to traumatized populations based on his work with patients during and after the world wars. Based on this work, he proposed that trauma "release[s] bad objects from the unconscious" (Fairbairn, 1943). He added that once the bad objects are released, not only do they disturb the patient, but since the bad objects are now associated with the traumatic event, the traumatic event disturbs the patient as well. In addition to proposing the underlying mechanism of trauma, Fairbairn called for "effective psychotherapy of an exorcistic order" in order to relieve symptoms. He asserted that in the absence of psychotherapy, the most a patient could hope for is to be able to use repression to once again "banish" the bad objects into the unconscious.

However, this method is not truly effective, he said, because the repression only gives peace during waking hours. Fairbairn observed that soldiers who otherwise deny memory of trauma or disturbance while awake may still be afflicted by nightmares at night. This, he stated, is consistent with the use of repression as a defense in trauma. By carefully observing his traumatized war patients, both soldiers and uprooted children, Fairbairn was able to weave the impact of trauma into a coherent theory about the origin of pathology and disturbance that was to pave the way on which future theorists, such as Otto Kernberg and Stephen Prior, would expand.

Otto F. Kernberg

One of the most influential object relations theorists, Otto Kernberg made important contributions to our understanding of the development of the adult character and personality pathology. He wrote extensively on Borderline Personality Organization (BPO), which he differentiated from Borderline Personality Disorder (BPD) as providing a richer picture of an individual's functioning in relationships than the DSM-5 diagnosis (Yeomans, Clarkin, & Kernberg, 2002, p. 4).

This richer picture stems from the fact that BPO not only describes overt symptoms; it also describes the underlying dynamics and intrapsychic organization from which the symptoms emerge. These BPO dynamics, in turn, impact how an individual relates to others, including romantic partners. Kernberg placed all severe personality disorders at this Borderline level of organization (Yeomans, Clarkin, & Kernberg, 2002, p.7), and used character labels (e.g., narcissistic, dependent, schizoid) to describe the way an individual's temperament interacts with their environment and object relations (e.g., affect regulation, defenses, etc). Underlying all of the severe personality disorders are identity diffusion, reality testing disturbance, and the use of primitive defense mechanisms, especially splitting (Yeomans, Clarkin, & Kernberg, 2002, p. 8-

10). Identity diffusion refers to the "fragmentation rather than integration of the representations of self and others that are internalized over the course of development" (2002, p. 8). The notion of identity diffusion sheds some light on why splitting, the rigid separation of "good" and "bad" qualities with no ability to see that they can coexist in others or in the self, continues to be used as a defense long after it is developmentally appropriate. The split between good and bad in the earliest stages of development, as described by Klein and Fairbairn, persists into adulthood in these BPO individuals.

According to Kernberg's theory of development (Yeomans, Clarkin, & Kernberg, 2002), children normally outgrow splitting between the ages of one and three years of age. Earlier on in development, children feel anger towards their environment and the objects in it for not being able to satisfy their every need. Unlike Klein and Fairbairn, who primarily focused their theories on the mother, Kernberg also identified hunger, thirst, fear, wet diapers, etc. as discomforts that growing infants have to endure but cannot understand other than to realize they are "bad." Sometimes mothers are able to satisfy their children's needs and relieve their discomfort—infants are fed, diapers are changed, and all is right with the world. The infant internalizes this satisfying mother as "good," and maintains this concept of the mother as distinct from the mother who is not able to satisfy every demand they have (i.e., the "bad" mother). When the memories of deprivation and of satisfaction are laid down, they are colored by the affects the child was experiencing at the moment, either positive or negative. By keeping the concepts of good and bad separate, the good is "protected" from the bad. In other words, children use splitting as a defense because they feel the need to protect their internal good objects from bad objects so the bad objects will not overwhelm or obliterate the good objects. By doing so, they will always

have a “perfect” “good” mother they can think of who will take care of them. This image of a good mother is comforting to infants in a world over which they have very little control.

As they continue to develop, the valence of memories impacts the capacity for integration. If infants and young children have laid down enough positive affect-laden memories, they are able to safely integrate good and bad when they are between one and three years of age. That is, they are able to see that “good mommy” is sometimes “bad mommy,” and, in fact, they are the same person. When their mothers behave in a frustrating or withholding manner, the “bad” qualities of the mother do not obliterate the good that is in the mother, nor does the good go away forever. However, when children internalize affect-laden memories that are primarily negative, there is still the desire to protect the good experiences and feelings they have by keeping them separate from the bad experiences. These children, Kernberg theorized, become adults who are organized at a Borderline level (Yeomans, Clarkin, & Kernberg, 2002). They still feel the need to protect their good objects from their internalized bad objects, as they never outgrew splitting.

Quite obviously, the continued use of primitive defenses, such as splitting, can wreak havoc on an individual’s relationships. Because no one is purely good or bad, BPO individuals react in a strong, positive manner to others when they are on good terms, but they can shift violently to sudden hatred of others (a display of primitive rage) when others make a mistake or disappoint them. Most of us could not tolerate the large swings from love to hate; rather, we would feel disturbed by those changes. BPO individuals tolerate these swings through the use of denial, which protects them from feeling distress about the use of splitting. Although they are aware that they “hate” someone, even though they “loved” that same someone only two seconds prior, this shift does not seem unreasonable to them. Kernberg observed that those organized at a

borderline level do not see anything odd about this approach to interacting and relating (Clarkin, Yeomans, & Kernberg, 2006). In fact, they see this shift in feelings as a reasonable response to the situation (e.g., "They hurt me, so of course I would feel or react this way. Anyone would!"). These astute observations by Kernberg and his colleagues about those who are organized at a borderline level led to the development of Transference Focused Psychotherapy. They also set the stage for future theorists, including Stephen Prior, to incorporate Kernberg's intrapsychic development theory into an object relations theory about the impact of trauma.

Stephen Prior

Until now, the connection between object relations, trauma, and abuse has been hinted at, but not fully explored by any one theorist. However, a little-known object relations theorist, Stephen Prior, built upon the work of Kernberg, Fairbairn, and others to address the interaction between one's intrapsychic world and abuse. Prior (2004) noted that Kernberg's theories, while of considerable value, neglect crucial aspects of the psychic world of those who have been exposed to long-term severe abuse. For example, he noted that Kernberg's theories focus almost entirely on an individual's internal world, an inability to integrate, and the presence of primitive anger. However, Prior indicated there is little attention given to the impact of the external world on the traumatized child or how overt problematic behaviors in relationships may stem from reasonable attempts to minimize or avoid future retraumatization (Prior, 2004). In fact, Prior asserted that no object relations theory has sufficiently accounted for the impact of long-term abuse. Because trauma is often noted as playing a significant role in the development of personality disorders, which negatively impact relationships, an appreciation of the impact of environment on character development and personality organization is warranted.

According to Prior (2004), who focused his theory on children with severe sexual abuse histories, understanding the impact of abuse on the psyche requires an understand of four basic psychological dynamics or dilemmas that might be present: "(1) the relentless reliving of abusive relationships, either as victim or as perpetrator; (2) the reliance on identification with the aggressor as a basic mode of psychological defense; (3) the unshakable conviction of being the cause of the abuse, deserving the abuse, and being utterly bad; and (4) the seeking of object contact through physical violence, sexuality, or some combination of the two" (pp. 61-62).

The first dilemma, i.e., the reliving of abusive relationships as victim or victimizers, suggests that in cases of long-standing abuse, the same person can be both a victim and a victimizer. That is, being a victim or victimizer may be two sides of the same coin. The reason for this assertion is based on the theory that we learn how to relate to others based on our early relationships. If our early relationships are abusive, then abuse is the only way in which we know how to relate to others. For these children, there are "no other modes or means of relating" (Prior, 2004, p. 62). Abuse may still be incredibly painful, but these children have no knowledge of other ways to relate to others. Without treatment, the attempts to relate through some form of violence (e.g., being abused, abusing others, abusing oneself) persist through adulthood. Sadly, the ways in which these individuals try to connect to others tend to cause others to disconnect from them. As Prior observed in object relations play therapy with children, children insist on enacting these abusive ways of relating in play. For example, one nine-year-old patient told him quite clearly in their play that eventually, "You will have to kill me, or I will have to kill you." Relating as a victim or victimizer were the only modes of connecting this patient knew.

The second dilemma observed with long-standing abuse in childhood is the use of identification with the aggressor as a form of defense. Although Kernberg noted that BPO

individuals often identify with the aggressor without realizing they are doing so (Yeomans, Clarkin, & Kernberg, 2002, p. 28), Prior (2004) clearly outlined why one might psychologically "need" to engage in this defense. Prior described identifying with the aggressor as "an internal antidote to fear or weakness … [in addition to] a means of preventing perceived revictimization" (p. 64). However much comfort the child (or future adult) may derive from the illusion that they are an invincible predator who is immune from being a victim, the use of this defense leads to a critical dilemma. Children feel rage towards their victimizers and often harbor conscious and unconscious fantasies of their abusers being punished severely or annihilated. If the child identifies with the aggressor in order to feel less vulnerable to victimization, they may then believe they deserve the same treatment that their abusers deserve. Hence the dilemma: "I can be safe by being like my abuser, but then I am bad and deserve to be destroyed. I can stay 'good' and not act like my abuser, but then I am vulnerable to being victimized again." There is no good solution to this dilemma, but often for children, the fundamental need for safety wins out, and they identify with the aggressor to maintain a sense of safety.

Prior (2004) stated that the third dilemma, the belief that one is bad and caused the abuse, is a use of the omnipotence defense to reassure oneself that one is not completely helpless or unable to stop the abuse. Put simply, if the abuse is your fault, theoretically you could stop it at any time. All you would need to do is stop doing whatever it is that you think is causing the abuse. The situation is under your control. This belief spares the victims the terror that comes with having no control over an abusive situation and knowing that the abuse could happen again with very little that can be done about it. The omnipotence defense provides the illusion of safety. Unfortunately, there is a considerable psychological cost to this defense. If one is "causing" their own abuse, then the abuse is their fault. That is, using the omnipotence defense is

akin to believing that one deserves the abuse they receive because they are somehow asking for it. These individuals derive comfort from the idea that if they could simply figure out what is wrong with them, they would be able to avoid further trauma. Unfortunately, that belief is founded on the assertion that something is, in fact, wrong with them. Prior believed this accounts for the guilt and shame often seen in victims of trauma.

The fourth and last dilemma identified by Prior is the need for perverse object contact (2004, p. 68). He explained:

> The sexually abused child has to contend with feelings that his loving impulses, his desire for relationship and contact with others, bring about what is perverse and violent. It is one thing to believe that one's aggressive feelings injure others or turn relationships bad. It is even worse to believe that one's affiliative desires are ultimately perverse, destructive of relationship, and the cause of one's own abuse. This cruel paradox, that the desire to love and be loved causes violence and perversion is, I believe, one reason why sexual abuse is so damaging to the child's sense of self and other. The child comes to believe that love destroys (p. 68).

Thus, the child is left with no "healthy" ways in which to interact with others because even their healthy, loving inclinations lead them to behave in ways that harm themselves and others. This leaves them with the impression that relationships are damaging, and they are shameful. Yet the desire to relate persists.

Effectively understanding the impact of long-standing abuse and the possible seeds of violence in relationships requires an understanding not only of Kernberg's (Clarkin, Yeomans, & Kernberg, 2006; Yeomans, Clarkin, & Kernberg, 2002) theory of intrapsychic development and defense, but also Prior's (2004) theory on the impact of trauma on children. If early trauma is not addressed, the internalized, pathological object representations resulting from abuse will persist and guide individuals in their interactions with others as they age into adulthood. It is my argument, based on Prior's and Kernberg's theories, that the negative impact of abuse (even if it

is not severe sexual abuse) and violence in relationships in childhood sets the stage for further victimization and victimizing later on via the internalization of bad object representations.

This is in no way an attempt to 'blame the victim' for their own abuse; rather, it is an attempt to take a compassionate and understanding look at how individuals with a history of relationship violence may be involved in those relationships as a means of relating to others in the only way they know how. That is, they expect that abuse in relationships is the 'cost' of object contact. They see others in simplified 'good' and 'bad' terms, rather than seeing others as complex individuals with good and bad qualities that coexist. They expect abuse in relationships, rather than seeing abuse as a signal that a relationship is not working. In some ways, the violence and abuse in relationships may feel comforting, as it is 'charted territory,' so to speak. These individuals grew up learning how to relate to others in this dysfunctional manner. A relationship without dysfunction, from an object relations perspective, may feel foreign and disconcerting. Thus, I would argue these relationships involve people who understand violence as a predictable way of achieving object contact, which they desire, and this understanding would be as true for the victim who finds themselves in multiple violent relationships as it is for the identified perpetrator. That is, I would argue their internal relational templates look quite similar.

Measuring Qualities of Object Relations

Given the contribution object relations theories have made to understanding personality organization, defensive structure, and exposure to trauma, a variety of measures have been designed to capture these aspects of patients. The field of object relations is varied; as depicted above, there is no "one" object relations theory. Consequently, the various measures of object relations variables focus on different aspects of an individual's functioning. This section

provides a brief overview of the variety of measures that have been developed to quantify object relational health.

One of the more interesting measures to be developed was an instrument designed to explore object relations information in dreams. The Object Representation Scale for Dreams (Krohn & Mayman, 1974) was used to assess patients on three dimensions: (1) Capacity for Empathy, (2) Identification, and (3) Differentiation. A subsequent study by Hatcher and Krohn (1980) found that "higher functioning" patients had dreams that predicted therapeutic success when rated using this scale.

Outside of dream analysis, several measures have been designed to assess object relations functioning on the basis of interview information. One of the earliest measures in this category, the Ryan Object Relations Scale (Ryan & Bell, 1984), measures patients' (1) Emotional Quality of Representations, (2) Integrity of Representations, and (3) Quality of Interaction Between Self and Others. On the basis of these categories, patients are subsequently classified as "Psychotic," "Borderline-Depressive," "Neurotic," or "Normal," following the broad psychoanalytic descriptions of personality organization levels (McWilliams, 2011).

Another measure in the interview category, the Object Relations Inventory, is in the form of a semi-structured interview (Diamond, Kaslow, Coonerty, & Blatt, 1990). This interview explores the patient's significant relationships based on the patient's descriptions of individuals such as their parents, family members, friends, and therapist. These descriptions are then rated to determine an individual's functioning on two levels: (1) Separation/Individuation and (2) Intersubjectivity.

One of the early measures designed to specifically explore object relations material with the Rorschach was the Concept of the Object Scale (Blatt, Brenneis, Schimek, & Glick, 1976).

This measure combined elements of ego psychology theory with developmental theories to evaluate Rorschach responses for: (1) Differentiation, (2) Articulation, (3) Motivation to Action, (4) Integration of Object and Action, (5) Content of Action, and (6) Nature of Interaction.

As seen in this brief overview, many of the previously developed scales on object relations have been self-report or interview-based. One of the many benefits to measures that are in these formats is the ease with which they are utilized in research. However, performance-based measures (previously referred to as "projective tests") continue to be popular tools to assess object relational health clinically and in research. One such measure, the SCORS-G (Stein, Hilsenroth, Slavin-Mulford, & Pinsker, 2011), is growing in popularity and is the focus of the current study.

Social Cognition and Object Relations Scale- Global Rating Method (SCORS-G)

One of the most well-known scales used to assess object relations with performance-based measures is the Social Cognition and Object Relations Scale (SCORS; Westen, 1991; Westen, Lohr, Silk, Gold, & Kerber, 1990; Westen, Lohr, Silk, & Kerber, 1985). The original version of the SCORS was a 5-point scale used to derive object relations information from TAT protocols. As the name suggests, this measure was created based on object relations theory and developmental social cognition research. The four areas of functioning evaluated by the original SCORS were: (1) Complexity of Representations of People (COM), (2) Affect-Tone of Relationship Paradigms (AFF), (3) Capacity for Emotional Investment in Relationships and Moral Standards (EIRM), and (4) Understanding Social Causality (SC). One of the many strengths of this measure is the research supporting its use with adult, adolescent, and child populations at various levels of psychological health.

Although the original SCORS (and future iterations) have been used to score TAT protocols, early memories, and therapy transcripts from a variety of populations, the original dimensions were empirically derived to differentiate patients with Borderline Personality Disorder (BPD) from 'Normals' and those with Major Depression (MDD) (Westen, Lohr, Silk, Gold, & Kerber, 1990; Westen, Lohr, Silk, Gold, & Kerber, 1985). Each point on the 5-point scale for each dimension reportedly identifies a patient's development on that dimension, in terms of the maturity of object representations. For example, the COM dimension was designed to identify the extent to which one can see others as whole, complete people with both good and bad qualities. This dimension was found to effectively distinguish patients with BPD from patients with MDD (Westen et al., 1990; Westen et al., 1985). The AFF dimension was created to describe the "affective coloring of the object world, ranging from malevolent to benevolent" (Westen et al., 1985). Westen et al. reported this dimension was able to significantly discriminate individuals with BPD from both individuals with MDD and those identified as 'Normal' (Westen et al., 1990; Westen et al., 1985). The EIRM dimension was created to describe an individual's emotional investment in (rather than simply knowledge of) relationships and moral values. This dimension significantly discriminated between BPD and 'Normal' populations. Lastly, the SC dimension was created to capture the ability to make reasonable conclusions about why people do what they do in social situations (as opposed to making illogical attributions based solely on emotions). This dimension also significantly distinguished BPD from 'normal' individuals (Westen et al., 1990; Westen et al., 1985).

Since its creation, the SCORS has subsequently undergone several revisions and remains a popular and widely-used measure to assess object relations functioning with the TAT. The current version of this measure, the SCORS-G (Stein, Hilsenroth, Slavin-Mulford, & Pinsker,

2011), is a 7-point scale that looks at object relations data in eight areas: complexity of representations (COM), affective quality of representations (AFF), emotional investment in relationships (EIR), emotional investment in values and moral standards (EIM), understanding of social causality (SC), expression and management of aggressive impulses (AGG), self-esteem (SE), and identity and coherence of self (ICS). It may be used to evaluate the quality of object relations material in TAT protocols, Early Memories Test protocols, and psychotherapy transcripts (Stein et al., 2011).

There is a paucity of information available as to how the new dimensions (AGG, SE, and ICS) were derived, except that they are meant to address additional aspects of functioning related to quality of object representations (Stein & Slavin-Mulford, 2018; Stein et al., 2015). The AGG dimension was designed to measure whether an individual can contain anger and impulsivity. That is, do they act out violently, or do they engage in prosocial means of coping with anger? The SE dimension was created to indicate how a person views themselves (e.g., Do they see themselves as 'all bad,' or do they have a more realistically positive self-appraisal. Lastly, the ICS dimension was created to measure whether an individual's sense of self was fragmented or integrated in nature. Unlike the COM, AFF, EIM, EIR, SC, and ICS dimensions, AGG and SE dimension scores are not seen as developmental in nature (i.e., a score of "5" on these dimensions is not 'more developed' than a score of "2.") Rather, AGG and SE ratings are best viewed as a representation of how maladaptive vs. adaptive one's functioning is, with lower scores indicating more maladaptive functioning. For more information about the exact scoring requirements for each subscale, please see Stein and Slavin-Mulford's (2018) comprehensive scoring guide and Stein et al.'s (2011) online scoring templates.

Although it is a relatively new measure, findings from SCORS-G studies suggest it is useful for characterizing the differences between groups with various levels of relational health. Handelzalts, Fisher, and Naot (2014) used the SCORS-G to evaluate the quality of object relations that women have in relation to romantic relationship status. This study determined that women involved in romantic relationships had greater understanding of social causality than did those not currently involved in such relationships, as measured by the SCORS-G. These women also told stories that rated higher on mutuality and reciprocity on the EIR scale. These findings suggest that in order to have relationships, people need to be able to accurately perceive and interpret the behaviors of others. They also need to collaborate with others in a manner that respects the individuality of the other person and seeks reciprocally satisfying outcomes.

An additional study with adolescents demonstrated that the SCORS-G is a useful tool for distinguishing between characterologically-healthy and unhealthy adolescents. DeFife, Goldberg, and Westen (2015) found "medium to large effect size differences" between adolescents with and without personality pathology. The SCORS-G Composite score was significantly related to patient DSM-IV GAF score, measures of school functioning and externalizing behaviors, and psychiatric history. Importantly, this study found that the information gained from the SCORS-G was more useful than the DSM-IV personality disorder diagnostic criteria for determining how well adolescents handle stress and behave in a safe and socially-appropriate manner, as measured by the Clinical Data Form—Adolescent Version (CDF-A; Westen, Shedler, Durrett, Glass, & Martens, 2003). Thus, the SCORS-G may be particularly useful for treatment planning or creating a comprehensive case conceptualization for patients at various ages and stages of development.

There are several aspects of the SCORS-G that suggest it may be an appropriate measure to use to explore the quality of object relations in a population of individuals with a history of relationship violence. First, the SCORS-G was designed to measure several dimensions of object relations functioning, as opposed to just one or two. Second, the 7-point scale for six of the eight dimensions incorporates psychological development milestones (e.g., moving from concrete and fragmented to more abstract and integrated ways of thinking about others). Both Kernberg (Yeomans, Clarkin, & Kernberg, 2002) and Prior's (2004) theories suggested that violence and/or BPO are associated with immature object relations. Third, the SCORS-G has a dimension that was specifically designed to code for aggressive themes, especially how an individual handles aggressive impulses. This dimension is clearly relevant to whether or not an individual acts out in a violent manner in relationships (or expects others to act out violently). Lastly, the new SE and ICS dimensions code for how one relates to themselves. As Kernberg (Yeomans, Clarkin, & Kernberg, 2002) suggested, a stable sense of who one is in relation to others provides a foundation for how one relates to others in relationships. Thus, the SCORS-G dimensions cover a wide range of functional domains that may all relate to an individual's relational templates.

Since its development, the SCORS-G has been normed on both clinical and non-clinical populations. Stein, Slavin-Mulford, Sinclair, Siefert, and Blais (2012) scored 301 TAT stories from 59 patients and examined the content construct validity of the SCORS-G dimensions with a Principal Components Analysis (PCA). They determined that the SCORS-G's eight dimensions loaded into three categories: relational tone (EIR, AFF, EIM, and AGG), self-esteem/identity/coherence of self (SE and ICS), and cognitive/intellectual functioning (COM and SC). They determined that the relational tone and self-affective factors correlated with self-report

measures like the PAI and NEO-FFI. The cognitive factor correlated with the WASI and WCST. This study suggests that the SCORS-G demonstrates good convergent validity when compared to other popularly used personality and cognitive instruments.

In addition to construct validity, there is evidence that the SCORS-G demonstrates criterion validity as a measure of behaviors or history related to borderline psychopathology. Stein, Slavin-Mulford, Siefert, Sinclair, Smith, Chung, Liebman, and Blais (2015) found that the SCORS-G had good criterion validity in a clinical sample of inpatients and outpatients when considering history of psychiatric hospitalizations, suicidal behavior, non-suicidal self-harm, substance abuse, conduct disorder, history of trauma, and level of education. In this population, suicidality was associated with lower quality object relations as measured by the overall SCORS-G Composite score. Suicidal ideation was negatively correlated with the AFF, AGG, SE, and ICS subscales, and number of suicide attempts was negatively correlated with the SCORS-G composite and SC scales. Various SCORS-G subscales were significantly related to arrest history, substance abuse, suicidal and homicidal ideation, education, physical abuse history (child and adult), suicide attempts, and psychiatric hospitalization. Thus, the SCORS-G appears to be a useful scale for understanding the relationship between a patient's quality of object relations and life events that may lead them to seek therapeutic services, including events related to violent relationships.

Outside of clinical samples, Bram (2014) and Siefert et al. (2016) normed the SCORS-G on non-patients in order to allow the SCORS-G to be interpretable for non-clinical populations. Bram's (2014) norms were averaged across all cards administered to 63 undergraduate students; Siefert et al. (2016) provided card-level norms and average norms for 49 undergraduate students. The utility of non-clinical norms for the Rorschach Comprehensive System has been valuable to

understanding how functional personality organization and defensive styles manifest (Exner, 2003). Additionally, Bram pointed out that object relations theories propose models of normative development rather than simply focusing on non-normative development that results in psychopathological phenomena. When calculating card-level norms, Siefert et al. (2016) found that card pull significantly impacted the scores for cards 2 and 3BM in their undergraduate student sample. Both Bram (2014) and Siefert and colleagues (2016) had average norms that were comparable across all dimensions, with average scores between 2.78 and 4.64.

Because these theories propose that all individuals—not just those in clinical populations—have relationships in life that are necessarily impacted by the quality of relationships they had with primary objects, Bram (2014) argued that it is necessary to use object relations measures on those in non-clinical populations to provide support for broader object relations theoretical perspectives. His PCA of SCORS-G scores found that SCORS-G variables cluster into two components for non-clinical participants: Emotional Aspects of Representations and Cognitive Aspects of Representations. Support was found for the SCORS-G's content validity. Additionally, the cognitive component, but not the affective, significantly differentiated the non-clinical sample from previously published clinical samples. The affective component was significantly related to male participants' scores on the Revised UCLA Loneliness Scale (RULS), which measures interpersonal functioning. For female participants, the affective component was significantly negatively correlated with somatic symptoms. However, in the non-clinical sample, the affective component did not correlate with the mental health self-report measure (General Well-Being scale; GWB). Thus, the factor structure of the SCORS-G may be different in clinical vs. non-clinical populations (3 vs. 2-component solutions, respectively), but

it still provides clinically useful information related to interpersonal functioning, somatic symptomatology, and differentiating clinical and non-clinical populations.

Although the utility of the SCORS-G has been initially established in terms of construct validity and criterion validity in clinical, non-clinical, adult, and adolescent populations, Stein, Slavin-Mulford, Siefert, Sinclair, Renna, Malone, Bello, and Blais (2014) wrote about special considerations for the SCORS-G's use with the TAT. They looked at the stimulus pull for various TAT cards using the SCORS-G, and they found that the SCORS-G was useful for understanding card pull. For example, cards 3BM and 13MF were found to have the strongest pull for "negative pathological object representations." Card 2 pulled for the healthiest and most adaptive responses. Stein et al. (2014) stressed the importance of card pull when interpreting the SCORS-G with TAT cards to ensure an accurate assessment of how adaptive and mature an individual's object relations are. Focusing interpretations on cards that naturally have a pathological pull may create an overly pessimistic impression of an individual's psychological health.

Despite minor concerns about the impact of TAT card pull, the SCORS-G is a promising scoring system to measure various aspects of object relations health. It addresses not only overt symptoms, but also interpersonal and intrapsychic dynamics. Thus, it provides a sense of who a patient is and how they interact with their world, which I suggest is the ultimate goal of psychodynamically-informed assessment. Most importantly for this dissertation, it measures aspects of object relational health that are relevant to understanding violent relationships.

Mutuality of Autonomy Scale (MOA)

Apart from the TAT, the Rorschach has also been used as a means of assessing the quality of object relations. Perhaps the best-known and most widely used object relations

measure used with the Rorschach is the Mutuality of Autonomy scale (MOA) by Urist (1977) and Urist & Schill (1982). This 7-point scale is applied to Rorschach movement responses, including human, animal, and inanimate movement (Kelly, 1997, p. 43). Higher scores on this measure indicate more relational pathology; lower scores suggest more relational health and maturity. After each individual movement response is scored, four summary scores are generally computed to give a sense of the patient's overall relational functioning: (1) The mean MOA score, which provides an overall sense of the patient's relational maturity; (2) the MOA-Path, which is the number of MOA scale point scores rated as 5,6, and 7 and is a good indicator of the likelihood of psychopathology; (3) The highest object representation (HOR) score; and (4) the lowest object representation (LOR) score. These last two scores may provide valuable information about the patient's range of relational functioning. For example, one might expect a patient whose highest score is 7 (the most pathological) to have more severe deficits in object representations, even if these deficits only manifest in limited situations, than a patient whose highest score is a 4. These scores also have important implications for therapy, particularly psychodynamic psychotherapy, as they provide an important preview for future regressive behaviors that may present in session (Kelly, 1997). The scores may also provide information as to what type of support the patient may need as he or she moves through the phases of therapy. Please see Kelly (1997) for an excellent, detailed description of MOA scoring criteria.

Research into the validity and reliability of the MOA scale has been promising. MOA scales have been identified as a valid indicator of psychopathology and quality of object relations in psychiatric inpatients, psychiatric outpatients, medical patients, adults, adolescents, and children (Ackerman, Hilsenroth, Clemence, Weatherill, & Fowler, 2001; Brown-Cheatham, 1993; Bombel, Mihura, & Meyer, 2009; Graceffo, Mihura, and Meyer (2014); Harder,

Greenwald, Wechsler, & Ritzler, 1984; Kelly, 1997; Tuber, 1989). This validity is present regardless of the number of items used (Urist & Shill, 1982); however, validity increases as the number of data points contributing to MOA summary scores increases (Graceffo, Mihura, & Meyer, 2014). Additionally, MOA scores accurately reflect lifetime pathology in hospitalized patients, but not necessarily the pathology they display at the time of the assessment (Harder, Greenwald, Wechsler, & Ritzler, 1984). Scale-Point scores of 7 have been shown to predict self-harm (mutilation) in patients with Borderline Personality Disorder and the likelihood of psychotic processes (Fowler, Hilsenroth, & Nolan, 2000). The rating scale is clear enough to allow for respectable inter-rater reliability, ranging from 82% to 91% agreement within one point (Harder, et al., 1984). Thus, the MOA scale can be reliably scored and is a valid measure of variables relevant to psychotherapy outcomes.

As may be clear at this point, the SCORS-G and MOA scales each take a different approach to measuring quality of object relations. While MOA scores purport to focus on relational pathology in Rorschach movement responses, which may involve aggression and identity disturbance, it does not directly code for those aspects of functioning. The SCORS-G, like MOA, may provide information about what one expects from relationships (e.g., EIR dimension), but the SCORS-G was also designed to measure other aspects of object relations functioning, including how individuals relate to themselves. Thus, the SCORS-G was designed to provide a wider, more complex picture of object relations functioning than MOA. However, as previously stated, the MOA has been established as a reliable measure of relational variables relevant to psychotherapy outcomes, which likely accounts for its enduring use and popularity in research.

Despite the benefits of measures such as the SCORS-G and MOA in comprehensive psychological assessments, they are not the most widely used measures of psychopathology or social cognition. In this next section, I will discuss the other measures of social cognition and psychopathology I will be using in this study: the MMPI-2 and WAIS Picture Arrangement (PA) and Comprehension (CO). Traditionally, the PA and CO of the WAIS have been used as measures of social understanding. Before exploring the merits of those two subtests, I will first turn my attention to the most popular measure of psychopathology in use today—the MMPI-2 (Butcher, Dahlstrom, Graham, Tellegen, & Kraemer, 1989; Drayton, 2009).

Minnesota Multiphasic Personality Inventory-2

The Minnesota Multiphasic Personality Inventory was originally developed by Hathaway and McKinley (1943) in order to provide a "sampling of behavior of significance to the psychiatrist" (Hathaway & McKinley, 1940). According to Nichols (2011), the items of the MMPI were developed on the basis of psychiatric textbooks, mental status exams, and other psychological tests at the time, and covered a variety of topic areas, including psychiatric symptoms, family life, attitudes about authority, political views, interests, education, and gender "typical" behaviors. Once the items were developed, they were then administered to individuals with a variety of psychiatric illnesses (e.g., schizophrenia, bipolar disorder, depression, etc.) and psychologically healthy individuals from the University of Minnesota heath care system. The MMPI Clinical Scales were developed based on which items discriminated the healthy group from the clinical groups.

Due to the popularity of the MMPI, with over 2,000 references by the year 1965, Butcher, Dahlstrom, Graham, Tellegen, & Kraemer (1989) set about developing the MMPI-2, which was designed to increase the clinical utility of the original MMPI and address some of the

inadequacies that had come to light since its introduction. Over 100 new items were added, and some of the least useful items on the original scale were removed. The new "healthy" norm group consisted of participants from a variety of states, roughly conformed to 1980 census data, and included demographic "subsamples," such as Native Americans living on a reservation in Washington state (Nichols, 2011). However, Hispanics and Asian Americans continued to be underrepresented, and the norm group generally had higher levels of education and occupation than the census indicated was true for the United States (Nichols, 2011). Although there continue to be concerns about over- and under-pathologizing underrepresented groups, the MMPI-2 continues to be the most widely used measure of personality and psychopathology in use today (Drayton, 2009). Approximately 10,000 published papers and texts include the MMPI-2 and have provided guidelines for personality assessment, job performance, assessment of airline pilots, etc. (Aamodt, 2004; Butcher, 1994; Butcher et al., 2001; Cullen, et al., 2003).

The MMPI-2 scoring and interpretation is relatively straightforward. Raw scale scores are converted to *T*-scores (Mean = 50; SD = 10) so they can be compared to the normative sample. Clinically-elevated scores are defined as being at a *T*-score of 65 or above, meaning that the score is at or above the 92nd percentile. That is, only 8% of the population is estimated to score at a "clinically elevated" level. However, Butcher and Williams (2000) suggest interpreting *T* scores between 60 and 64 as being "moderately elevated" and as having some diagnostic value. Additionally, two Clinical Scales (0 and 5) have scores that may be interpreted when "significantly low." Interpretations of the Clinical Scales are discussed below.

The MMPI-2 contains a variety of validity scales, three of which are relevant to the current study: *L*, *K*, and *F*. The F scale contains 60 items within the first 300 items of the test and measures endorsements of items that suggest an individual may be either exaggerating or

minimizing problems (Butcher & Williams, 2000). Several items used in the scale address symptoms consistent with severe mental illness, such as psychotic phenomena. *T*-scores between 60 and 80 are suggestive of distress consistent with clinical levels of psychopathology, and *T*-scores between 80 and 100 may indicate severe psychopathology or exaggeration of symptoms (Butcher & Williams, 2000). The *L* (Lie) Scale contains 15 items that cover common moral failings or imperfections (Butcher & Williams, 2000). Denial of an excessive number of items on the *L* scale suggests an unwillingness to admit flaws and casts doubt on the accuracy of a profile that would otherwise be within normal limits. Lastly, the *K* scale purports to measure impression management and defensiveness, particularly a tendency to downplay or deny psychological disturbance (Butcher & Williams, 2000). It is comprised of 30 items and covers items endorsing hostile attitudes, relationship distress, paranoia, and denial of needs.

In addition to these validity scales, the MMPI-2 contains 10 Clinical Scales: (1) Hypochondriasis, (2) Depression, (3) Hysteria, (4) Psychopathic Deviate, (5) Masculinity-Femininity, (6) Paranoia, (7) Psychasthenia, (8) Schizophrenia, (9) Hypomania, and (0) Social Introversion. Test-retest correlations for these scales range from .54 to .93, and most scales had correlations at or above .70 (Butcher, et al., 2001). Because empirical criterion keying was used to develop the scales (i.e., choosing which items identified individuals in the clinical group as distinct from the healthy group), the item content may not be obviously related to the illness that that scale purports to measure. Thus, studying what items patients endorse may not be as useful as it would be in other measures. The 10 Clinical Scales are as follows (Butcher & Williams, 2000):

Scale 1: The Hypochondriasis scale identifies individuals that report an excessive concern about their physical health or report excessive physical problems above and beyond

what would be expected of someone with a verified physical illness (Butcher & Williams, 2000; Greene, 2000).

Scale 2: The Depression scale covers symptoms typical of depression, for example, low mood and lack of motivation. Harris and Lingoes (1955) determined the items in this scale fall into five broad categories: subjective depression, psychomotor retardation, physical malfunctioning, mental dullness, and brooding. Butcher and Williams reported this scale can "clearly differentiate depressed inpatients from normal, with a *T*-score of 65 providing good separation between the two groups" (2000, p. 67; Graham & Butcher, 1988; Ben-Porath, Butcher, & Graham, 1991).

Scale 3: Hysteria covers symptoms that are consistent with the current diagnosis of conversion disorder. Harris and Lingoes (1955) identified the items in this scale as covering: denial of social anxiety, need for affection, lassitude-malaise, somatic complaints, and inhibition of aggression.

Scale 4: The Psychopathic Deviate scale was developed to measure antisocial or psychopathic behaviors. The content of the items in this scale are quite diverse and cover familial discord, authority problems, social imperturbability, social alienation, and self-alienation (Harris & Lingoes, 1955). Scale 4 has been validated on an impressive number of groups, including those with antisocial personalities, prisoners, juvenile delinquents, police, those who enjoy thrill-seeking activities, and drug abusers, among others (Boes, Chandler, & Timm, 1997; Capwell, 1945a; Capwell, 1945b; Megargee et al., 1999; Nichols, 2011; O'Connor, 2017). However, because the items that comprise Scale 4 address more than just antisocial acts, it is important to look at the Harris and Lingoes subscales in question in order to know how to interpret a high Scale 4.

Scale 5: Masculinity-Femininity was designed to identify “male sexual inversion” (Dahlstrom & Welsh, 1960; Hathaway, 1956) or “homosexual men who had a feminine interest pattern” (Butcher & Williams, 2000). Despite the controversy related to this scale, and the problems associated with norming it (i.e., only 13 reportedly gay men were used), it is currently used to determine how individuals identify with traditional masculine or feminine values. However, many, including Constantinople (1973), have found considerable problems with the interpretation of Scale 5 in general, and it is recommended that interpretations based on this scale be used tentatively.

Scale 6: Paranoia assesses the presence of suspiciousness of others and their motives, in addition to frankly delusional beliefs (Butcher & Williams, 2000). Harris and Lingoes (1955) described the items in this scale as covering three broad themes: persecutory ideas, poignancy, and naïveté.

Scale 7: Psychasthenia may be described as an “anxiety disorder with obsessive-compulsive features,” and addresses symptoms that would accompany such a disorder, including feeling tense, being high-strung, having difficulty concentrating, and being perfectionistic. Because the content of the items was determined to be addressing a single dimension, no Harris Lingoes subscales exist for Scale 7. According to Butcher and Williams (2000), research on 7 has shown it to be associated with “severe and debilitating anxiety.”

Scale 8: The Schizophrenia scale covers several areas of symptoms consistent with a psychotic illness, including social alienation, emotional alienation, lack of ego mastery (cognitive), lack of ego mastery (conative), lack of ego mastery (defective inhibition), and bizarre sensory experiences (Harris & Lingoes, 1955; Hathaway, 1956). Numerous researchers have investigated this scale and have found it to be associated with a number of psychiatric

illnesses, including schizophrenia (Graham & Butcher, 1988; Lewinsohn, 1968; Moldin, Gottesman, Rice, & Erlenmeyer-Kimling, 1991; Rosen, 1958; Shaffer, Ota, & Hanlon, 1964; Wauck, 1950).

Scale 9: The Hypomania scale was designed to measure various symptoms associated with manic or hypomanic states. The items in this scale broadly cover amorality, psychomotor acceleration, imperturbability, and ego inflation (Harris & Lingoes, 1955).

Scale 0: The Social Introversion scale was developed separately from the other scales of the MMPI. Drake (1946) created this scale by testing college students who scored high or low on a measure of extroversion and introversion. subscales were later developed to specifically address endorsement of items in the following content areas: shyness, social avoidance, and self-other alienation (Ben-Porath, Hostetler, Butcher, & Graham, 1989).

Because of the breadth of information the MMPI-2 provides about psychopathology and personality, it remains the most popular personality assessment tool currently in use (Drayton, 2009). Although Stein et al. (2012) used the Personality Assessment Inventory (PAI) to assess the validity of the SCORS-G, to my knowledge, the SCORS-G has not been compared to the MMPI-2. The current proposed study will fill this gap in the literature.

WAIS-R and WAIS-III Picture Arrangement

Apart from personality measures, Stein et al. (2012) also compared the social cognition component of the SCORS-G to the Wechsler Abbreviated Scale of Intelligence (WASI), a cognitive assessment measure used to estimate FSIQ. Although they found a significant relationship between WASI VIQ and PIQ with the SCORS-G, the WASI subtests do not contain material that directly addresses social cognition. However, two of the full WAIS tests (WAIS-R

and WAIS-III) contain subtests that purport to measure this construct: Picture Arrangement (PA) and Comprehension (CO).

The Wechsler Adult Intelligence Scales have been a staple of cognitive testing for several decades, have undergone three revisions, and are currently on their fourth edition (Wechsler, 2008). Previous editions, particularly the WAIS-R (Wechsler, 1981) and WAIS-III (Wechsler, 1997), included measures of social cognition in its standard 10 subtests administered to every patient. Two CFA studies on the WAIS-R indicated the presence of subtests that pick up on social information or "social cognition" (Allen, Strauss, Donohue, & van Kammen, 2007; Goldstein, Allen, Minshew, Williams, Volkmar, Klin, & Schulz, 2008). These subtests, theoretically, measure an individual's ability to identify and interpret information that would enable them to successfully navigate social situations. Goldstein et al. (2008) suggested that, in order to successfully complete these subtests, one must first perceive and then analyze "line drawings depicting various social situations and common objects." Goldstein et al. (2008) reported that identification of details relevant to social interactions and knowledge of common social situations were both identified as necessary to solving problems on these subtests. Although research is mixed as to how well certain subtests measure social cognition, traditionally the Picture Arrangement and Comprehension subtests have been used to get a sense of an individual's social functioning and understanding.

The Picture Arrangement subtest is billed as a nonverbal assessment of social cognition and logic (Rapaport, Schafer, Gill, & Holt, 1968, p.131; Wechsler, 1981, 1997). On this subtest, a "story" is told in pictures on a series of several cards. The cards are placed in front of the test taker in the wrong order, and the test taker is asked to arrange the cards in the correct order to tell a sensible story. According to Glasser and Zimmerman (1967, p. 76), this subtest may indicate

"social alertness" and "common sense" because the test taker needs to examine the cards and use their knowledge of social situations and consequences of actions in order to place the cards in an order that makes logical sense. Rapaport, Schafer, Gill, & Holt (1968, p.131) noted that Picture Arrangement requires the test taker to anticipate the effects of behavior on future situations, and thus demonstrates an individual's ability to plan. Thus, Picture Arrangement may allow test takers an opportunity to show assessors they can use their knowledge of social situations and social rules, in addition to their reasoning skills, to create a story that demonstrates an understanding of how social situations may logically proceed. Low scores on this subtest may be an indication that a test taker is ineffective in social situations. In fact, Rapaport et al. (1968, p.131) wrote that this subtest is useful for psychodiagnostic purposes, as individuals with psychotic disorders tend to do poorly on it. Thus, Picture Arrangement may provide important clues as to how one manages social situations, and poor performance on this subtest may provide hints as to an individual's psychopathology.

Similarly, the Comprehension subtest assesses understanding of social situations and societal rules. According to Glasser and Zimmerman (1967, p. 45-46), Comprehension measures whether or not an individual can express knowledge of social rules and moral judgment using language. In fact, when used with children (WISC Comprehension), this subtest can indicate the extent to which moral understanding and conscience have developed. Allison, Blatt, and Zimet (1968, p. 25) observed that "low scores [on Comprehension] may represent a need to defy or ignore social conventionality, or they indicate an impairment in judgment or a diminished interest in social interaction." As they did for Picture Arrangement, Rapaport et al. (1968; p. 98) offered interpretations of poor performance within the context of psychopathology, as those with psychotic disorders tend to do poorly on Comprehension. Thus, similar to Picture Arrangement,

Comprehension may provide a sense of the test taker's social cognition and how this knowledge is related to mental health.

It is important to note, however, that there is some controversy about these subtests being actual measures of social cognition. Studies questioning the validity of the subtests as measures of social cognition often compared them to measures based on, for example, clinician ratings (Campbell & McCord, 1996; Lipsitz, Dworkin, & Erlenmeyer-Kimling 1993). However, it is not clear that the conclusions reached by these authors should be used to guide subtest interpretation. For example, Lipsitz, Dworkin, and Erlenmeyer-Kimling (1993) reported CO and PA were not valid measures of social cognition after they compared them to a measure of hostility that only included three items and was based on clinician observation. They reasoned that the participants' level of hostility was a measure of "social adjustment," and the three items of the measure were "reported hostile feelings," "observed hostility," and "reported conduct disorder." Despite their caution against using Comprehension and Picture Arrangement as sensitive indicators of social cognition, it would be worth investigating these subtests' validity compared to other measures of social cognition, given the limitations of previous studies.

Other studies have found support for the use of IQ subtests as a measure of social cognition, especially Picture Arrangement (Allen et al., 2007; Goldstein et al. 2008). Allen and Barchard (2009) used CFA to create a model for the WAIS-III that includes a Social Cognition factor comprised of Picture Arrangement and Picture Completion. They noted that although their data did not fit a model in which Comprehension fit into the Social Cognition factor, they hypothesized that "it may be that substantial method variance (visual vs. verbal) precluded its loading on the same factor as Picture Arrangement and Picture Completion." They noted that Comprehension measures not only "social knowledge" but also "practical knowledge;" thus,

although it does contain several items relevant to social knowledge, the practical knowledge component of the subtest may influence factor loadings. Thus, despite some challenges in the literature against using Comprehension and Picture Arrangement as relevant to social cognition, overall the content of these subtests, in addition to interpretive guidelines, suggests these tests are useful for evaluating social functioning and internalized understanding of social situations and rules. Thus, it would stand to reason that dimensions of the SCORS-G that relate to social cognition (COM and SC; Stein et al., 2012) would significantly correlate with the Comprehension and Picture Arrangement subtests of the WAIS-R and WAIS-III. To my knowledge, the SCORS-G has yet to be compared to the MMPI-2 and the CO and PA subtests of the Wechsler Intelligence Scale(s) for Adults, as the leading measures of personality and social cognition.

Aggression and Violence in Relationships

I have not found any research suggesting the SCORS-G has been studied in relation to violent relationships. However, given object relations theories of trauma and violent/abusive relationship dynamics and the properties of the SCORS-G, SCORS-G factors may be able to discriminate those with a history of violence or violence in relationships from those without such a history. The scoring criteria (content) of each SCORS-G dimension appear to account for an aspect of functioning that would be impacted by relational trauma, including one's relationship to others and oneself.

Drawing from Prior's (2004) theory, individuals with an early history of abuse tend to engage in 'splitting' that places others and themselves into the role of either 'victim' or 'victimizer.' The SCORS-G COM and ICS dimensions' scoring criteria instruct raters to assign a lower score to those who engage in splitting compared to the scores given to those whose

narratives suggest they have the capacity to integrate the good and bad qualities of others or themselves. Those who tell narratives with characters believing they are 'all bad' would also score very low on the SE dimension. Additionally, Prior (2004) indicated that those with a history of relationship violence believe their affiliative urges are 'bad.' This belief, in addition to the belief that others will either be victims or victimizers, suggests that this population views relationships as malevolent. TAT narratives that portray relationships as malevolent or damaging are given the lowest possible score on the SCORS-G AFF dimension (i.e., 1). The belief that relationships are damaging would also likely negatively impact their ability to emotionally invest in others, and TAT narratives communicating this belief would likely score low on the EIR dimension. Prior (2004) theorized that victims of abuse learn that "love destroys" (p. 68). That is, they misattribute the cause of their negative social interactions as being due to their affiliative desires. This distortion of causality in social relationships may be coded on the SCORS-G SC scale. In order to maintain a sense of safety, Prior (2004) proposed that victims of early abuse 'identify with their aggressors.' This identification may lead such victims to tell TAT narratives that are coded as more pathological on the EIM and AGG scales. Thus, there are theoretical grounds for suggesting the SCORS-G dimensions may measure constructs relevant to relationship violence and trauma.

Given Prior's (2004) theory, it follows that the SCORS-G might discriminate those with a history of relationship violence from those without such a history. However, it should be noted that violence may stem from other sources. According to Anderson and Bushman (2002), who developed the general aggression model, aggression can arise for multiple reasons (e.g., rage, male competition, boredom). They argued that due to the multiple reasons for violence, a comprehensive model for aggression should show how aggression can originate from multiple

sources. The field of neuropsychoanalysis, which combines the latest evidence from neuroscience with psychoanalytic theory, has identified three broad sources of aggression: male dominance behavior, cold aggression, and hot aggression (Solms & Turnbull, 2002, p. 124). Because hot aggression is relevant to the current study, I will only briefly review the other two forms of aggression.

Male dominance behavior and cold aggression are neurobiologically distinct from hot aggression. Male dominance behavior, for example, is classified as a "social emotion" (Solms & Turnbull, 2002, p. 124). This social emotion likely functions to improve the odds of passing one's genes along, and does not stem from deep feelings of rage or hatred. Similarly, cold aggression does not originate from feelings of anger. Cold aggression, also referred to as 'predatory aggression,' is related to the "seeking system" or "reward system" in the brain (Solms & Turnbull, 2002, p. 116). Those familiar with classical psychoanalytic theory may relate the concept of cold aggression to the concept of a libidinal drive (Solms & Turnbull, 2002, p. 117). In fact, some argue that drive theory is the best way to understand this form of aggression. According to Juni (2009), cold aggression is "a mode that is essentially designed as a subjective release of tension, akin to libidinal discharges, in which the object of hostility is not central." Just as a lion does not have to 'hate' an antelope in order to kill it and eat it, neither do rapists who operate from a place of cold aggression feel rage towards their victims. The victims, like the antelope, are (for lack of a better word), merely 'lunch.'

Hot aggression, by contrast, always takes the object of the aggression into consideration. This type of aggression stems from the "rage system" and is a form of "affective attack behavior" (Solms & Turnbull, 2002, p. 124). Unlike the seeking system, the rage system that is responsible for hot aggression is not always activated. This may be because hot aggression does

not stem from a libidinal drive; rather, this aggression is best explained at an object relations level (Juni, 2009). According to Juni (2009), who researches extreme forms of aggression in the form of sadism, episodes of hot aggression are "re-enacted events of violence […] attributed to object relations disturbances." He added that these re-enactments "relating to past traumatic events [are] inevitably violent […and] the victim chosen often is reminiscent of key players in the primary trauma." This explanation of hot aggression is reminiscent of Prior's (2004) theory that victims of traumatic abuse "relentlessly relive" the "abusive relationships, either as victim or perpetrator" (p. 61).

The multiple origins of aggressive or violent behavior have implications for identifying the underlying causes of relationship violence with the SCORS-G. For example, those who exhibit male dominance aggression may not appear pathological on the SCORS-G, as this behavior may be a biologically 'healthy' way to ensure one's genes are passed along. That is, it is conceivable that an individual with mature object representations could engage in this type of aggression. However, those who commit cold or hot acts of aggression may look similarly disturbed on the SCORS-G. For example, in order to commit acts of cold aggression against other human beings (i.e., see them as 'lunch'), some ability to dehumanize one's own victims and see them as a means to an end almost certainly must be present (Solms, 2015). This ability to dehumanize others or to focus solely on one's own gratification, regardless of the impact on others, would suggest some degree of relational pathology (Juni, 2009). TAT stories that have similar themes score low on dimensions such as EIR and EIM. Likewise, those telling stories with themes of hot aggression would also likely obtain low scores on several SCORS-G dimensions. As a result, the SCORS-G may not be able to discriminate easily between those who commit cold aggressive acts and those who commit hot aggressive acts in relationships. Thus,

although the SCORS-G may be able to identify when aggressive acts come from underlying pathology, it may not be able to discriminate between the types of pathology. This potential weakness aside, it would seem as though it is likely that the SCORS-G will still be useful for identifying those with internalized pathological relationship templates.

Present Study and Hypotheses

The previous discussion of theory and measures of object relations, especially the newest version of the SCORS-G (4th edition), supports the need for further study of object relations assessment tools. This study has two major objectives, both of which serve to answer Bram's (2014) call to produce and disseminate research about the utility of object relations measures. The first objective is to provide further evidence of the construct validity of the SCORS-G as a measure by exploring its factor structure and comparing it to other measures of social cognition and object relations functioning in an outpatient sample. The second objective is to explore the clinical utility of the SCORS-G dimensions in assessments of individuals with a history of violent relationships, either as victim or perpetrator. Each objective will serve to expand the literature on the merits of the SCORS-G.

There is currently ample room to add to the present literature on the structure and content validity of the SCORS-G. For example, at the time this study was proposed, there was relatively little investigation into the underlying structure of the SCORS-G. Both Stein et al. (2012) and Bram (2014) used Principal Components Analyses (PCA) to analyze their SCORS-G data. While those analyses were appropriate for their data, they left us with the need for further study into the underlying factors that comprise the SCORS-G, as PCA results are not generalizable across samples. According to Field (2013, p. 674-675), Exploratory Factor Analysis (EFA) was created with the assumption "that the technique would be used to explore data to generate future

hypotheses," and thus was intended to be extrapolated to other samples within a population of interest. It estimates factors based on a mathematical model (Field, 2013, p. 675). This mathematical model has assumptions that must be met, such as the lack of extreme multicollinearity, if the model is to yield interpretable results (Field, 2013, p. 686). Thus, EFA is not appropriate for all data sets. PCA, however, was created assuming the sample and the population are the same, and it "decomposes the original data into a set of linear variables" (Field, 2013, p. 675). PCA is not rendered uninterpretable by multicollinearity (Field, 2013, p. 686). In order to generalize the findings of a PCA study, either EFA may be used or additional PCAs on other samples may be performed (Field, 2013, p. 674). If the characteristics of a data set indicate PCA is more appropriate than EFA, additional PCAs on new samples that identify the same basic components as found previously suggests generalizability of the underlying structure of the SCORS-G. If the various PCAs do not agree, we will need to search elsewhere for information that can be generalized across outpatient samples.

Stein et al. (2012) and Bram (2014) found different components for the SCORS-G, so as of the moment, neither one of their studies can be generalized beyond their samples. Later studies continued to conflict as to the number of underlying factors or components (Lewis et al., 2016; Peters et al., 2006; Richardson et al., 2018; Siefert et al., 2017). The nature of the participants in these studies was different, however, so it is not clear if the different components in their studies reflect the different nature of their sample groups (outpatient vs. nonclinical). The need to generalize and the need to resolve conflicting information necessitates more research in this area. Because my planned analysis in this area will be exploratory only (Exploratory Factor Analysis or PCA), I offer no formal hypotheses to test here. However, due to my sample being

an outpatient sample (like Stein et al.'s (2012) was), I expect to see three underlying components or factors that comprise roughly the same dimensions as their PCA found.

Although the contents of each factor for the study are currently unknown, AFF, EIR, and AGG dimensions are believed to be likely to cluster into self/affect and interpersonal relationship factors, as they did in Stein et al. (2012). They are mentioned here because it is likely that each of them shares variance with MOA, so the factor on which they load is presumed to share variance with MOA. MOA measures indicators of one's expectations of relationships as malevolent, dangerous, and scary or as benevolent and mutually-beneficial. The SCORS-G AFF dimension may tap into affective expectations of relationships as damaging or beneficial. SCORS-G AGG, particularly the lower scores indicating "assaultive" themes, may tap a similar construct as do MOA's higher, more damaging relationship scores. Lastly, the SCORS-G EIR dimension purports to measure indicators in narratives that one can emotionally invest in relationships. Theoretically, this dimension should measure a similar construct as MOA because MOA measures indicators of relational health.

In addition to the principal component structure analyses that have been performed on the SCORS-G, it has also been used in correlational studies to establish its construct validity as a measure of social cognition and object relations. Presently, I am not aware of any studies comparing the SCORS-G to the MOA to determine whether these measures correlate. As previously described, the MOA scale measures indicators of relational pathology in Rorschach movement responses (i.e., relationships seen as malevolent vs. mutually beneficial), and the SCORS-G measures several indicators of object relations in TAT narratives (for example, complexity of representations or the capacity for emotional investment in relationships). Although they measure different aspects of object relations quality, theoretically, the mature or

immature quality of one's object relations should be consistent on each measure. That is, if one's quality of object relations is poor, both MOA and the SCORS-G should indicate the immaturity (unless an individual scores poorly on some SCORS-G dimensions and high on others). Additionally, I am not aware of the SCORS-G being compared to another measure of object relations, despite its having been compared to cognitive measures, structured self-reports, and questionnaires (Bram, 2014; Stein et al., 2012). As Ganellen (2007) pointed out, performance-based and self-report measures tend to correlate weakly with each other, even if they both purport to measure the same construct. According to Bornstein (2009, 2011), the measures correlate weakly because the process of formulating a response to these types of tests is so different. Comparing two performance-based measures of object relations may yield stronger correlations, due to the broadly similar response type. Based on the expected relationship between the MOA scores and SCORS-G dimensions, the following hypotheses are proposed:

1. The SCORS-G Composite (mean) should correlate negatively with MOA-mean, as both scores serve to provide an overall sense of the quality of one's internal representations. The negative correlation is due to higher scores being less pathological on the SCORS-G but more pathological on the MOA.
2. Beyond simple comparisons to MOA-mean, the SCORS-G Composite and SCORS-G factors related to self/affect and interpersonal functioning should be negatively correlated with MOA-Path, MOA-High, and MOA-Low.

In addition to comparing the SCORS-G to a performance-based measure of quality of object relations, it will be compared to an established measure of personality. Object relations theories (e.g., Kernberg, Prior, and others) purport to explain the underlying dynamics of personality. Thus, measures that claim to characterize effectively the quality of one's internal representations should theoretically correlate to measures that capture broad aspects of personality, such as the Personality Assessment Inventory (PAI) and the Minnesota Multiphasic Personality Inventory-2 (MMPI-2). Stein et al. (2012) ran correlation analyses for three SCORS-

G components compared to the validity and clinical scales of the PAI. They found significant correlations between the component that tapped themes of how one feels about oneself (comprised of Self-Esteem and Identity and Coherence of Self) with PAI NIM, PIM, Somatization, Anxiety, Anxiety-Related Disorders, Depression, Schizophrenia, Borderline Features, Aggression, Suicidal Ideation, Stress, and Treatment Rejection scales. They also found that Antisocial Features, Aggression, and Warmth scales from the PAI correlated with the SCORS-G component comprised of the AFF, EIR, EIM, and AGG dimensions. However, the PAI is not the most commonly used structured self-report measure of personality in use. By far, the MMPI-2 is still the most widely used measure for examining psychopathology and personality traits (Drayton, 2009). Thus, examining how the SCORS-G factors relate to MMPI-2 validity and clinical scales would serve to (1) fill a gap in the literature and (2) allow clinicians who are more familiar with and comfortable with the MMPI-2 than the PAI to better understand what the SCORS-G factors tap. Based on general object relations theory, the relationship between the SCORS-G and PAI scales found by Stein et al. (2012), and research about the content of the MMPI-2 scales, the following hypotheses are proposed:

3. Factors of the SCORS-G that theoretically measure how one relates to oneself (possibly containing SE and ICS dimensions) should correlate negatively with MMPI-2 F scale and Clinical Scales 1, 2, 3, 6, 7, and 8. These MMPI-2 scales appear to measure similar constructs as the PAI scales that correlated with Stein et al.'s (2012) component containing SE and ICS.

4. Factors of the SCORS-G that relate to functioning in interpersonal relationships, morality, and aggression (those containing AFF, EIR, EIM, and AGG) should correlate negatively with Clinical Scales 4 and 9. SCORS-G factors or components containing these dimensions correlated with PAI scales that reportedly measure constructs related to Antisocial Features and Aggression (Stein et al., 2012). MMPI-2 Clinical Scales 4 and 9 purport to measure similar constructs (Butcher & Williams, 2000).

Apart from significant correlations with structured self-report measures of personality, SCORS-G components have also been previously compared to cognitive measures, including the

WASI (Stein et al., 2012). WASI VIQ and PIQ were both significantly positively correlated with the SCORS-G component that included COM and SC. However, the WASI does not contain subtests that specifically claim to measure social cognition and social judgment. Thus, there is an opening in the literature to examine the relationship between subtests of the WAIS-R and WAIS-III that are designed to measure social cognition (Picture Arrangement and Comprehension) and factors of the SCORS-G that claim to do the same. The utility of using these two subtests from the Wechsler measures is that these subtests measure different aspects of social cognition. That is, Picture Arrangement measures social understanding nonverbally and Comprehension measures social cognition using language. Based on previous SCORS-G research and the literature on the Wechsler subscales, the following hypothesis is proposed:

5. The SCORS-G factor related to social cognition (dimensions COM and SC) should correlate positively with Picture Arrangement and Comprehension.

Apart from contributions to the literature about the content validity and structure of the SCORS-G, I also intend for this project to contribute to clinically-useful knowledge about the SCORS-G and relational pathology. As suggested by the name, the SCORS-G is not an atheoretical measure. Theory is important for the use and interpretation of SCORS-G data, and the clinical utility of this measure depends on its ability to represent in data what theorists have proposed based on clinical observations. For example, multiple theorists, especially Prior (2004), proposed internalized representations of objects are intimately tied to the outward behavioral manifestations of severe relational trauma. Prior theorized that victims use identification with the aggressor (and thus aggressive acts) to defend against feeling vulnerable to repeated attack by perpetrators. According to Prior (2004), identification with the aggressor and reliving victim-victimizer relationships are a natural consequence of chronic, severe interpersonal trauma.

Because victims and victimizers only know that way of relating to others, at an object representations level, victim and aggressor are two sides of the same coin.

Given the preponderance of trauma cases clinicians see in their consultation rooms, it is clinically useful to derive information about the quality of a trauma patient's object representations in an assessment. This information may be provided by the SCORS-G. I will explore the utility of the SCORS-G for assessing those with a history of relationship violence (i.e., trauma) from two standpoints: (1) determining which TAT cards are most useful to elicit relevant stories and (2) determining which factors of the SCORS-G may be more informative about trauma-related representations.

With respect to which cards may be most useful when evaluating those with a history of violent relationships, multiple researchers have noted that certain TAT cards "pull" for different themes, quality of object representations, and defenses (Cramer, 2017; Jenkins, 2017; Jenkins, Dobbs, & Leeper, 2015; Jenkins, Siefert, & Weber, 2019; Seifert et al., 2016; Stein et al., 2014). That is, certain TAT cards may sample situations that would provide information about how individuals feel about specific interpersonal relationships. It is these relationships that might have been damaged with early trauma, especially relationships of an intimate or vulnerable nature. Cards that pull for particular relationship themes would naturally pull for reactions from those with a history of relationship violence that represent malevolent themes. I found no research as to which TAT cards might be best to use with the SCORS-G to provide the most relevant information for cases of interpersonal trauma.

To my knowledge, there is no current research to determine whether those with a history of relationship violence differ on the SCORS-G from those with no history of relationship violence. It would be clinically useful to know which TAT cards produce narratives that, when

scored with the SCORS-G, could be most informative with these patients to understand the impact that violence may have had on the quality of their object representations. I expect that Cards 4 and 13 MF will prompt more clinically relevant stories for this issue than Cards 1, 2, and 3BM. Cards 4 and 13MF contain both a man and woman of approximately the same age that appear to be in some sort of relationship with one another. Thus, they are more likely to sample thoughts and feelings related to close heterosexual relationships (Jenkins, 2017; Jenkins, Siefert, & Weber, 2019) than do cards that only contain one person or multiple people who have no obvious connections to one another (e.g., Cards 1, 2, 3BM).

The SCORS-G COM, AFF, EIR, EIM, and AGG dimensions reportedly measure indicators in narratives of the ability to form healthy relationships. COM rates narratives on the ability to see others as whole, complete human beings with integrated good and bad qualities. AFF rates narratives on the affective tone of depicted relationships. EIR evaluates indicators in narratives of the ability to connect emotionally to others. EIM rates narratives on the extent to which a person has internalized and integrated morals and values into their lives (not simply 'knowing' the rules but also caring about them). AGG is clearly relevant to relationship violence, as it purports to measures aspects of narratives that indicate how a person manages their aggressive impulses. Each of these dimensions appears to measure constructs in narratives that are relevant to relationship violence. As part of this study, I will be testing the following hypotheses:

6. SCORS-G factors or components related to interpersonal relationships and self/affect themes will discriminate the violent relationship group from the problematic nonviolent relationship and the non-problematic relationship groups.
7. For the violent relationship group, SCORS-G factor scores for relationship cards (4 and 13MF) should be significantly lower than their scores on non-relationship cards (1, 2, 3BM).

In sum, the intent of these analyses is to determine whether the SCORS-G, which purports to measure object relations functioning and correlates with the PAI, NEO-FFI, WASI, and WCST (Stein et al., 2012), is significantly related to another measure of object relations (MOA), to a more widely used structured self-report measure of personality and psychopathology (MMPI-2), to measures of social cognition (PA and CO), and to a history of violent relationships.

CHAPTER 2

METHODS

Participants

The participants in this study were past assessment clients in an outpatient university psychology clinic. A total of 81 participants participated in this archival study; 42 identified as female and 39 identified as male. The sample consisted of 62 individuals who identified as White, 6 as African American/Black, 7 as Hispanic, 1 as Multiracial, and 5 declined to report their ethnic or racial backgrounds. Each participant agreed to have their de-identified treatment data used in research when they consented for their assessment and/or treatment at the clinic. The means, standard deviations, skew, and kurtosis for age and years of education demographic data used in the current study are presented in Table 1. No significant deviations from normality or restricted range concerns were noted. Gender (as a binary variable) and ethnicity categorical data are presented in Table 2.

Procedures

Participants were selected from the clinic's files based on their having been administered a Rorschach, TAT, WAIS-R or WAIS-III, and MMPI-2, in addition to other measures as part of a full personality assessment at the university clinic. The specific clinician for each assessment varied, but each clinician was a graduate student in either a Clinical, Clinical Health, or Counseling Psychology PhD program, all of which included training with these measures in the first-year assessment curriculum. The Rorschachs and TATs were transcribed for scoring, and the TATs were grouped by picture to facilitate scoring (Jenkins, 2007). The Rorschach and TAT transcripts were each scored by two or more graduate student raters. The Rorschach was scored for the present study using both the Exner Comprehensive System and Mutuality of Autonomy

(MOA) scale. All TAT stories were scored using the 4th edition of the SCORS-G manual (Stein et al., 2011), and disagreements between raters were reviewed and discussed to the point of consensus, as described by Jenkins (2007, pp. 41-55). The resulting consensus scores were used for analysis.

Measures

Thematic Apperception Test (TAT; Murray, 1943)

Each participant was administered a set of TAT cards as part of their assessment, and they were asked to tell a story about the card. This story was to contain the following five elements: (1) what led up to the picture, (2) what is going on in the picture, (3) what the characters in the story are thinking, (4) what the characters are feeling, and (5) an ending for the story/ what happens in the end. Because these TATs were given as part of individualized assessments, the cards administered varied from participant to participant. However, most participants were administered Cards 1, 2, 3BM, 4, and 13 MF, so only these were selected for this project. Eighty-one participants received at least four of these cards.

Social Cognition and Object Relations Scale—Global Rating Method; 4th Ed.(SCORS-G; Stein et al., 2011)

This measure was used to rate the object relations quality of each TAT story on a scale from one to seven. Scores of one generally indicate poor levels of functioning, whereas scores of seven represent an advanced or mature level of object representation or social functioning. The SCORS-G is comprised of eight dimensions, including Complexity of Representations of People (COM), Affective Quality of Representations (AFF), Emotional Investment in Relationships (EIR), Emotional Investment in Values and Moral Standards (EIM), Understanding of Social Causality (SC), Experience and Management of Aggressive Impulses (AGG), Self-Esteem (SE),

and Identity and Coherence of Self (ICS).

The content validity of this empirically-derived measure is based on the scoring criteria for each dimension (see Stein & Slavin-Mulford, 2018). The elements of an individual's narratives are assumed to indicate their level of functioning, which is then scored. For example, the COM dimension scoring is used to rate narratives for the complexity of the characters depicted, which is used to make inferences about the complexity of the test taker's object representations. Additionally, COM evaluates whether or not a person describes others in stories as having distinct qualities, motives, and subjective experiences, both positive and negative. AFF evaluates what a person expects from relationships with others, given the content of their narratives. That is, are relationships described as dependable, nurturing, and beneficial, or malevolent, manipulative, and harmful? EIR assesses whether an individual's narratives contain characters that are able to emotionally connect to others in a mutual, reciprocal relationship, as opposed to creating relationships for the purposes of getting his or her own needs met without regard for others. The EIM dimension assesses a person's narration for indicators of an emotional connection to their conscience and values, as well as how he or she may apply them in relationships. SC evaluates narratives to measure the extent to which an individual is able to explain interpersonal exchanges and use them to accurately assess the motives and intentions of others. The AGG dimension uses indicators in narratives to deduce how a person conceptualizes aggressive impulses. That is, do characters in a story respond to these impulses with physical or verbal aggression, or do they acknowledge angry feelings and assert themselves in a prosocial manner? SE scores of narratives provide information about an individual's self-concept, ranging from seeing oneself as "evil" or "all bad" to being able to realistically appraise oneself and one's positive attributes. Lastly, ICS scores narratives for indicators of how stable an individual's

sense of self might be, as well as how fragmented or integrated their sense of self appears.

Stein et al. (2012) explored the content validity of the SCORS-G dimensions after they were grouped into components using PCA. Their PCA for an outpatient sample grouped AGG and EIM into one component (Component 1) that significantly positively correlated with NEO-FFI Agreeableness and Conscientiousness scales and negatively correlated with PAI Aggressiveness and Antisocial scales. Component 2 was comprised of SE and ICS and negatively correlated with NEO-FFI Neuroticism and PAI Negative Impression Management, Somatization, Anxiety, Anxiety-Related Disorders, Depression, Schizophrenia, Borderline, Aggression, Suicidal Ideation, and Stress scales. Component 2 positively correlated with Positive Impression Management and Treatment Rejection. The final component (Component 3) included the COM and SC dimensions and positively correlated with WASI VIQ and PIQ. It also positively correlated with number of categories achieved and perseverative errors on the Wisconsin Card Sorting Task (WCST). The AFF and EIR dimensions did not clearly load onto a single component in this analysis, as they both loaded onto Components 1 and 2. Stein et al. (2012) concluded Component 1 was related to interpersonal relationships, Component 2 was related to "emotional distress and psychopathology," and Component 3 related to "intellectual and cognitive abilities" (p. 537). Given the nature of the components and the content of the AFF and EIR dimensions, the dimensions may have loaded onto Components 1 and 2 because they are relevant to interpersonal relationships and emotional distress/psychopathology.

Rorschach Inkblot Test (Exner, 2003)

Each participant had been administered all 10 cards of the Rorschach Inkblot Test. The resulting protocols were scored according to Exner's Comprehensive System guidelines (Exner, 2001). Protocols were screened for adequacy of inquiry by a faculty member expert in teaching

the Comprehensive System, and those not considered trustworthy were discarded. Each protocol was scored by two graduate students who had been teaching assistants for the graduate personality assessment course. Scoring disagreements were resolved by consensus in consultation with the faculty supervisor.

Mutuality of Autonomy (MOA; Urist, 1977; Urist & Schill, 1982)

The MOA scale rates the mutual, reciprocal quality of Rorschach movement responses on a scale from one to seven. A score of one on the MOA is the highest possible and represents responses that show differentiated objects engaged in a positive, reciprocal activity. The most pathological score, seven, is reserved for responses in which the object is currently being annihilated. Once each movement response is scored, the mean MOA score (MOA-mean), pathological scores (MOA-Path), lowest and healthiest score obtained (MOA-L), and highest and unhealthiest score obtained (MOA-H) are all calculated to provide a sense of the health and maturity of an individual's functioning, from an object relations perspective. Estimates of MOA interrater reliability vary. For example, Urist and Shill (1982) found interrater agreement within one point to be .68. Ackerman et al. (2001) used an overall correct classification formula (Kessel & Zimmerman, 1993) to calculate the interrater reliability, which was found to be .84.

Minnesota Multiphasic Personality Inventory-2 (MMPI-2) (Butcher et al., 1989, 2001)

Participants were administered the MMPI-2, a 567-item structured self-report measure of psychiatric symptoms and personality features. MMPI-2 items are rated on a binary True/False scale, and these items are then used to calculate myriad Validity, Clinical, Content, Supplementary, Restructured, etc. scales. All selected files included a profile sheet with three Validity Scales (L, F, and K) and all 10 Clinical Scales (Hs, D, Hy, Pd, Mf, Pa, Pt, Sc, Ma, and Si). Other scales were not consistently available. Although the validity and reliability of the

Clinical Scales varies significantly, all Clinical Scales are included in this study, as the MMPI-2 remains the most frequently used personality self-report measure with adults (Ackerman & Ackerman, 1997; Miller, Lovler, & McIntire, 2013).

Wechsler Adult Intelligence Scale—Revised (WAIS-R); Wechsler Adult Intelligence Scale—Third Edition (WAIS-III) (Wechsler, 1981,1997)

All participants were administered either the entire WAIS-R or the WAIS-III. The specific version of the WAIS was determined by what test was current at the time of the test administration. For the purposes of this study, only the scaled scores of two of the WAIS subtests that correspond to social judgment or social cognition were used: Picture Arrangement and Comprehension. During the Picture Arrangement subtest, cards with pictures were placed in front of a test taker in the wrong order, and the test taker was asked to arranged the cards in the correct order to tell a sensible story. Allen and Barchard (2009) performed a CFA and found that Picture Arrangement fit into a "Social Cognition" factor. Although Comprehension did not fit into that factor, its content assesses understanding of societal rules and social situations (Glasser & Zimmerman, 1967, p. 45-46).

History of Relationship Violence

The UNT Psychology Clinic intake forms, assessment reports, and progress notes completed by clinicians were read by the faculty supervisor for this project to identify statements about the quality of the participants' adult relationships. This faculty supervisor did not read any raw test data, including TAT stories, so she was only influenced by direct, literal statements about participant relationships. She coded relevant statements literally as being in one of five possible categories: history of violent relationships as perpetrator (n = 15), history of violent relationships as victim (n = 6), history of problematic nonviolent relationships (n = 19), history

of few or no close relationships (n = 10), or nonproblematic relationships (n = 12). Being placed in one of these categories required clear, concrete statements that indicated they met criteria for the category (i.e., no inferences were made for classification purposes). Further details about these categories are as follows, as summarized from from Jenkins, Dobbs, and Leeper (2015):

> *"Nonproblematic relationships*." The reason for seeking therapy did not include relational problems, and there was nothing in the client's file suggesting that they should be placed in a problematic relationships group.
>
> *"Absence of relationships*." Participants in this group either directly reported (on the clinic intake paperwork) or had information in their file (including progress notes and assessment reports) suggesting "loneliness" and a "wish for more social involvement" were prompting their seeking of psychotherapy.
>
> "*Problematic relationships*." Participants placed in this group showed evidence of interpersonal problems, upheaval, or damaged relationships with family, friends, and/or coworkers. However, these individuals' files showed no indication of current or past violence in their relationships.
>
> *"Violent relationship (as victim).*" Participants in this group had files indicating they had experienced a history of relational violence as a victim. The perpetrator of the violence needed to be related to or connected to the participant in some way (i.e., random acts of violence by strangers were not considered as sufficient). Placement in this group required the participant was never identified as a perpetrator of physical violence in their chart.
>
> *"Violent relationship (as perpetrator)."* Participants in this category had files documenting one or more episodes of violence in their relational history, including romantic relationship violence and/or violence against family members (including children), friends, or coworkers.

For the purposes of this study, these five categories were reduced to three categories which are listed in Table 2. Based on Prior's (2004) theory about internalized object representations resulting from violent abuse, those with a history of violent relationships, either as the perpetrator or the victim, are grouped into the same category: "violent relationships." Those with a history of nonviolent, yet problematic relationships are labeled "problematic nonviolent relationships." Those in the nonproblematic relationships group remain as a single group labeled "non-problematic relationships."

CHAPTER 3

RESULTS

Descriptive Data and Concurrent Validity Measures

Study demographic variables are displayed in Tables 1 and 2. Resulting means, standard deviations, and normality information for all MOA, MMPI-2, and WAIS scales used in the current study are listed in Table 3. No variables significantly deviated from normality. No evidence of restricted range was found; MOA-Path's larger standard deviation is due to it not being on the same scale as the other MOA variables (i.e., it is not a single MOA value or average score, but a sum of all occurrences of scores at a 5, 6, or 7 level. Thus, the range of possible MOA-Path scores was much wider than for the other categories). Story length per card may be found in Table 4. Story length correlated significantly with COM ($r = 0.72$; $p < 0.001$), SC ($r = 0.65$; $p < 0.001$), ICS ($r = -0.22$; $p = 0.04$), and SCORS-G Composite ($r = 0.27$; $p = 0.01$) scores, which necessitated controlling for story length as a source of systematic method error.

Bivariate correlations revealed significant relationships between several demographic, SCORS-G, and non-SCORS-G variables. All significant relationships and any relationships between variables in which $r \geq 0.20$ were controlled for in subsequent analyses. Specific variables controlled for in each analysis are described in the discussion of the relevant analysis. These correlations are displayed in Table 5. Please note that the only correlation between a SCORS-G dimension and a demographic variable that trended toward significance was between SCORS-G AGG and Ethnicity, which had been reduced to two categories (1 = European descent, 2 = Non-European descent; $r = -0.20$, $p = 0.08$). Correlations amongst the SCORS-G dimensions are presented in Table 6.

Recent investigation into the psychometrics of the SCORS-G indicated that the amount of default scores in a protocol may influence how the protocol relates to other measures, as well as how informative the protocol may be (Stein, Siefert, Slavin-Mulford, Chung, Richardson, Massey, Bucci, Calderon, & Blais, 2019). "Default" scores are identified in the scoring instructions for each dimension (Stein & Slavin-Mulford, 2018). Because averaging scores that fall between benchmark descriptions is allowed, scores based on actual story characteristics may be the same numerically as default scores. (e.g., If a story's score content seemed to fall between a score of 3 and 5 on the AFF scale, a scorer may score the story as a 4. The default score for bland, absent, or limited AFF is also 4.) The scoring for the current study was completed before the research on bland protocols was available, and thus scorers did not identify which scores assigned were so-called "default" scores and which scores were simply average scores. However, information about the prevalence of scores that are numerically consistent with default scores is available in Table 7.

SCORS-G Reliability

As used by Bram (2014) and Stein et al. (2012), intraclass correlation coefficients (ICCs) were used as a measure of inter-rater reliability for SCORS-G ratings of TAT narratives. The reliability analysis was run using a one-way random effects model, and a single-measure (S) and average measure Spearman-Brown corrected model (A) were calculated, according to the instructions provided in Stein et al. (2011). The results of this analysis, along with SCORS-G dimension means and standard deviations, are reported in Table 8. According to the qualitative interpretations suggested by Shrout and Fleiss (1979), all of the resulting ICC (S) coefficients were in the "good" to "excellent" range, and all of the ICC (A) coefficients were in the "excellent" range. These analyses provide evidence of strong inter-rater reliability of the

SCORS-G. However, when internal consistency was explored treating cards as items, many of the resulting Cronbach's alphas for SCORS-G dimensions were quite low. Only COM and SC dimensions were in acceptable ranges, and this result is similar to those found by Siefert, Stein, Slavin-Mulford, Sinclair, Haggerty, and Blais (2016), who also found low alphas for dimensions other than COM and SC. Hibbard, Mitchell, and Porcerelli (2001) found similarly low alphas when using 4-5 cards, noting that internal consistency improved with administration of 10-12 cards. According to Jenkins (2017) internal consistency reliability is rarely reported for TAT stories, as "the major source of random error for manualized TAT scoring systems is disagreement between scorers." To that end, inter-rater alphas reported in Table 8 are all above 0.80, which is excellent and consistent with Stein et al. (2012).

Component Structure of the SCORS-G

A principal component analysis (PCA) was used to identify which linear components exist within the SCORS-G data and how each dimension might load onto that component. An initial exploratory factor analysis was completed on the data, but only six out of eight dimensions were retainable, as opposed to seven dimensions retainable with PCA. Based on initial component loadings and inspection of the scree plot and total variance explained by the model, two components were retained. Initial eigenvalues for this model were 3.34 for the first retained component and 2.21 for the second component, with the next highest eigenvalue at 0.80, so a third component was not extracted. A component plot of all dimensions suggested that varimax rotation would allow for a better model fit to the data (see Table 9). Because EIR loaded equally onto both components (Component 1 = 0.61; Component 2 = 0.58), it was not retained in the final PCA.

The component loadings from the final PCA with varimax rotation and seven extracted components are found in Table 10. Similar to Bram's (2014) results, the dimensions contributing to each component suggest that the first component ('Affective') is comprised of dimensions related to the affective or self-related aspects of internalized representations (i.e., AFF, EIM, AGG, SE, and ICS). The second component seems to account for another aspect of the internalized object world; namely, the 'Cognitive' aspects of representations (i.e., COM and SC; $r = 0.87$, $p < .001$). Both the Affective and Cognitive component scores for each study participant were calculated, and these scores were used in the following analyses of SCORS-G construct validity. EIR and SCORS-G Composite scores were also used in those analyses. (Note: an additional PCA was run controlling for TAT story length, but the results of the PCA were not changed. See Tables 11 and 12 for the PCA controlling for story length.)

Hypothesis Testing: Bivariate Correlations

Planned bivariate correlational analyses were used to explore the relationships between the SCORS-G components and various measures of object relations, personality, and social cognition. Because Emotional Investment in Relationships seemed particularly relevant to object relations, personality, and social cognition, even though it did not load onto a component, it was run separately in the following analyses. Additionally, the other individual SCORS-G dimensions and the SCORS-G Composite (Global) score was also used in correlational analyses to determine overall SCORS-G relationships with concurrent measure scales and to explore which dimensions contributed to significant correlations between the SCORS-G components and the MOA, MMPI, and WAIS. Data for these analyses may be found in Tables 13, 14, and 15 with significant correlations bolded.

Hypothesis 1

The first hypothesis stated that the SCORS-G Composite (mean) should correlate negatively with MOA-mean. The influence of ethnicity and story length were partialled out of the bivariate correlation analysis, which did not provide support for this hypothesis (partial r = 0.003; p =0.98). Thus, there was very little relationship at all between the SCORS-G composite derived from TAT narratives and the mean of MOA scores from Rorschach data. Hypothesis 1 was not supported. Exploratory analyses revealed no individual SCORS-G dimension or component correlated significantly with MOA-mean either.

Hypothesis 2

The second hypothesis proposed that the SCORS-G Composite and Affective component scores would be negatively correlated with MOA-path, MOA-High, and MOA-Low. All analyses controlled for story length and MOA-path analyses additionally controlled for the influence of education via partial correlation. No significant correlations were found between SCORS-G Composite and MOA-path (partial r = -0.08; p =0.54), MOA-High (partial r = 0.04; p =0.72), or MOA-Low (partial r = 0.15; p =0.21). Additionally, no significant correlations were found between the SCORS-G Affective component scores and MOA-path (partial r = -0.05; p =0.68), MOA-High (partial r = 0.01; p =0.91), or MOA=Low (partial r = 0.13; p =0.24). Thus, Hypothesis 2 was not supported. Exploratory analyses revealed a significant correlation between the AFF dimension and MOA-Low (partial r = 0.23; p =0.04).

Hypothesis 3

The third hypothesis posited that the Affective component should correlate negatively with MMPI scale F and Clinical Scales 1, 2, 3, 6, 7, and 8 because dimensions that measure feelings about oneself (e.g., SE and ICS) contributed to this component. Analyses involving

SCORS-G Affective component scores were controlled for the influence of ethnicity and all analyses controlled for story length using partial correlations. Analyses involving MMPI Scale 6 and 8 were controlled for the influence of gender via partial correlation. No significant correlations were found between the Affective component and Scales F, 1, 2, 3, 6, or 7. Thus, Hypothesis 3 was not supported.

However, the Affective Component correlated significantly with the *L* (partial $r = 0.27$; $p = 0.02$) and *K* (partial $r = 0.35$; $p < 0.01$) scales, which are both measures of underreporting pathology or a desire to minimize flaws and present oneself in a positive manner (Greene, 2000, p. 88). Interestingly, exploratory analyses found a significant correlation between SCORS-G Composite and the MMPI validity scale measuring defensiveness (*K;* partial $r = 0.36$; $p < 0.01$). The MMPI *K* Scale also correlated positively with AFF (partial $r = 0.40$; $p < 0.01$), EIR (partial $r = 0.34$; $p < 0.01$), EIM (partial $r = 0.26$; $p = 0.03$), and AGG (partial $r = 0.25$; $p = 0.04$).The MMPI *L* Scale correlated positively with AFF (partial $r = 0.31$; $p = 0.01$), AGG (partial $r = 0.30$; $p = 0.01$), and SE (partial $r = 0.31$; $p = 0.01$). Lastly, the Composite score and AGG correlated significantly with Scale 1 (partial $r = -0.24$, $p = 0.05$ and partial $r = -0.25$, $p = 0.04$, respectively), and SE correlated significantly with Scale 6 (partial $r = -0.24$, $p = 0.05$).

Hypothesis 4

Hypothesis 4 stated that the SCORS-G Affective component should correlate negatively with Clinical Scales 4 and 9, because dimensions related to interpersonal relationships, morality, and aggression contributed to this component. All analyses controlled for story length, and analyses involving MMPI Scale 9 were controlled for the influence of age and education using partial correlations. No significant correlations were found between the Affective component and Scales 4 and 9, so Hypothesis 4 was not supported. Exploratory analyses looking at the

relationship between Scales 4 and 9 and the individual SCORS-G dimensions also failed to uncover any significant correlations, including with the AGG dimension.

Hypothesis 5

The fifth hypothesis proposed that the Cognitive component of the SCORS-G would correlate positively with WAIS Picture Arrangement (PA; partial $r = 0.03$; $p = 0.78$) and Comprehension (CO; partial $r = 0.12$; $p = 0.30$). Similar to other analyses, these analyses used partial correlations to control for story length. The correlational analysis between the Cognitive component and WAIS- PA also controlled for the influence of age using a partial correlational analysis. No support for this hypothesis was found, but exploratory analyses revealed a significant correlation between WAIS-PA and SE (Self-Esteem; partial $r = 0.27$; $p = 0.02$).

Hypothesis 6: Discriminant Function Analysis

The ability of the SCORS-G to identify individuals with a history of violent relational trauma was an important aspect of the current research project. Hypothesis 6 posited that the SCORS-G Affective component would discriminate amongst the three relationship groups: violent, problematic nonviolent, and non-problematic relationship. A discriminant function analysis was performed using the SCORS-G Affective and Cognitive components to discriminate between relationship types (see Tables 16, 17, and 18).

The DFA revealed two discriminant functions. The first explained 85.4% of the variance, canonical $R^2 = 0.30$, whereas the second explained only 14.6%, canonical $R^2 = 0.07$. In combination, these functions significantly differentiated the relationship groups, $\Lambda = 0.66$, $\chi^2(4) = 19.58$, $p = 0.001$. After removing the first function, the second function only marginally differentiated the relationship groups, $\Lambda = 0.93$, $\chi^2(1) = 3.24$, $p = 0.07$. The correlations between outcomes and discriminant functions revealed that the Cognitive component loaded more highly

on the first function (canonical coeff. = 1.01) than on the second (canonical coeff. = -0.06). This function discriminated clients with apparent non-problematic relationships from those with problematic nonviolent and violent relationships.

The reverse was true for the Affective component, which loaded more highly onto the second function than the first (canonical coeffs. = 0.99 and 0.18, respectively) and discriminated problematic nonviolent relationships from nonproblematic and violent relationships. Overall, the model correctly classified 63.2% of violent and problematic nonviolent relationships and 58.3% of nonproblematic relationships. Although this DFA indicates that the SCORS-G discriminated between relationship groups, Hypothesis 6 was not supported, as the Affective component did not discriminate the violent from problematic nonviolent relationship groups.

The pattern of classification suggests that the SCORS-G is more likely to commit a false alarm error (false positive suggesting a violent or problematic relationship type) than to miss (false negative) the presence of problematic relationship patterns. For example, zero participants in the violent group were incorrectly predicted as being in the non-problematic relationship group, and only two participants out of a total of 19 in the problematic relationships group were incorrectly identified as being in the non-problematic group. However, three non-problematic group members (25.0%) and five problematic group members (26.3%) were incorrectly identified as belonging in the violent group.

An exploratory DFA using all SCORS-G dimensions provided additional discriminative power that correctly classified 75% of the non-problematic group members, 63.2% of the problematic group members, and 68.4% of the violent group members (Tables 19, 20, and 21). Like the previous DFA, the current DFA revealed two discriminant functions; the first function explained 80.8% of the variance (canonical $R^2 = 0.43$), and the second explained the remaining

19.2% of the variance (canonical $R^2 = 0.15$). Together, these functions discriminated between relationship groups, $\Lambda = 0.48$, $\chi^2(16) = 31.57$, $p = 0.01$. Without the first function, the second function did not significantly differentiate amongst the relationship groups, $\Lambda = 0.85$, $\chi^2(7) = 7.16$, $p = 0.41$. The correlations between outcomes and discriminant functions revealed that the Understanding of Social Causality (SC) and Identity and Coherence of Self (ICS) loaded more highly on the first function than on the second. This function discriminated clients with apparent non-problematic relationships from those with problematic nonviolent and violent relationships.

Hypothesis 7: Wilcoxon Matched-Pair Signed Rank Test

A Wilcoxon matched-pair signed rank test was used to test Hypothesis 7, which proposed that for participants in the violent relationship group, SCORS-G dimension scores for relationship cards (4, 13MF) will be significantly lower than scores on non-relationship cards (1, 2, 3BM). The Wilcoxon test was used due to the ordinal nature of the SCORS-G data and the within-subjects nature of the hypothesis. Although the differences in dimension scores between card type were not significant for most of the dimensions (see Table 22), significant differences were found on the AGG dimension and the Composite scores. On the AGG dimension, scores were significantly lower on relationship cards (*Mdn* = 3.00) than on non-relationship cards (*Mdn* = 3.92), $T = 9$, $p = 0.001$, $r = -0.73$. Additionally, on the Composite scale, scores were significantly lower on relationship cards (*Mdn* = 3.25) than on non-relationship cards (*Mdn* = 3.51), $T = 148$, $p = 0.03$, $r = 0.49$. Thus, hypothesis 7 was partially supported, as only AGG and Composite scores were significantly different between card type.

CHAPTER 4

DISCUSSION

The primary purpose of this dissertation is to contribute to a growing literature in support of psychodynamically-informed assessments, specifically those approached from an object relations perspective. To that end, this dissertation explored the structure, content validity, and clinical utility of the SCORS-G. Although a significant amount of research has been completed on the SCORS, the research on the SCORS-G is still in its relative infancy. In addition, this dissertation explored whether or not TAT card pull significantly impacts the quality of stories provided, as scored by the SCORS-G, for those reporting a history of violent relationships.

In order to explore the underlying structure of the SCORS-G, a Principal Components Analysis was run. Prior studies (Bram, 2014; Lewis et al., 2016; Peters et al., 2006; Stein et al., 2012) identified different linear component structures of the SCORS-G, including some with two and three-component solutions. The current study identified two linear components that seemed to be characterized by cognitive and affective aspects of interpersonal functioning. Complexity of Representations and Understanding of Social Cognition loaded onto one component (i.e., 'Cognitive'). The Affective component was comprised of the AFF, EIM, AGG, SE, and ICS. Interestingly, EIR loaded equally onto both Affective and Cognitive components, and thus was left out of the final PCA. This EIR finding is consistent with two studies that have also seen high loadings for EIR on both affective and cognitive components (Bram, 2014; Lewis et al. 2016). These previous studies utilized a nonclinical sample and an intensive residential sample with previous "near lethal suicide attempts," respectively. This study adds findings from a community clinic sample of outpatients to the evidence supporting a two-component (excluding EIR) solution.

Review of Hypothesis Tests

Hypothesis 1

In addition to the principal component analysis, this dissertation explored seven hypotheses pertaining to how the SCORS-G relates to often used psychological assessment measures and how the SCORS-G performs clinically. It should be noted that each of these hypotheses were based on previous SCORS-G literature that did not control for the influence of story length on the relationship between the SCORS-G and other measures. For discussion of the implication of controlling for story length, please refer to the "Additional Contributions to the Literature" section below.

The first hypothesis proposed that the SCORS-G Composite (Global mean) should correlate negatively with Rorschach MOA-mean, which was not supported. Additionally, no individual SCORS-G dimensions were correlated with MOA-mean.

Although both scoring systems claim to measure aspects of object relations functioning, one explanation for the lack of correlation may be that the nature and ambiguity of the tests are different (Bram & Peebles, 2014, p. 37; McClelland, Koestner, & Weinberger, 1989). Although both the TAT and Rorschach are performance-based personality measures, Bram and Peebles (2014, p. 62) noted there are differences in structure, level of ambiguity, amount of relational content, and the amount of emotional stimulation of each task. Due to the nature of the findings, the differences in the amount of necessary relational content in responses to test stimuli likely influenced the lack of correlation between MOA-mean and the SCORS-G Composite. Specifically, on the Rorschach, individuals have a choice as to whether or not they bring up relational content or report movement percepts. However, the TAT instructions require clients to engage with characters, as well as to report the thoughts and feelings of those characters. When

comparing tests purporting to measure the same or related constructs, McClelland, Koestner, and Weinberger (1989) noted that self-report and performance-based measures of the same constructs may show little relationship due to data differences and lack of common method variance. Given Bram and Peebles's (2014) explanation of the differences in TAT and Rorschach data, the task differences, including the different relational pulls of each task, may be mediating the lack of relationship between these variables.

Another explanation for the lack of correlational relationship is the high number of 'bland' scores for each of the dimensions that have a default score option. According to recent research from Stein, Siefert, Slavin-Mulford, Chung, Richardson, Massey, Bucci, Calderon, & Blais (2019), the SCORS-G is distinct from several TAT and performance-based measure scales because it includes so-called "default" scores. As a result, each story receives a score for each dimension, even if there is nothing in the story that is relevant to the dimension. As Stein et al. (2019) pointed out, default scores can add "noise" to the data. The Mutuality of Autonomy scale, on the other hand, only permits scoring of percepts that involve movement (Kelly, 1997). Thus, it is possible to have an entire Rorschach protocol that would not yield any MOA scores. While the impact of protocols with a high number of bland/ default scores is still under investigation, it is possible that the proportion of bland scores in the current data set is obscuring the hypothesized relationships between SCORS-G and MOA scores. Because default or bland scores may have the same numerical value as meaningful scores on the SCORS-G, unless they are recorded as "default" during the scoring process, it is impossible to extract default scores from the data set to determine the impact of this possible source of error variance. Thus, the actual relationship between SCORS-G and MOA remains unclear at present.

Hypothesis 2

Hypothesis 2 asserted that the SCORS-G Composite and the Affective composite scores should be negatively correlated with MOA-Path, MOA-High, and MOA-Low. However, none of these bivariate correlational analyses were significant; Hypothesis 2 was not supported. One possible reason for the lack of significant findings is mentioned above; that is, the SCORS-G and MOA data do not share common method variance (which would be systematic error), and apparently do not share notable construct-related variance either. Furthermore, there was a high number of bland or default dimension scores for SCORS-G stories in this study. This finding stands in contrast to Stein et al. (2012), who was able to document significant correlations between the SCORS-G components and the WASI, NEO-FFI, WCST, and PAI. Notably, Stein et al. (2012) had a much larger spread of scores than we had in the current study. Specifically, for each dimension, Stein et al.'s standard deviations were twice the size of those of the current study or greater, suggesting they had greater diversity in scores and a smaller percentage of default scores than in the current sample. It is possible that greater diversity in scores in the present sample, or the removal of bland scores from the analyses, may have revealed a significant relationship between SCORS-G and MOA variables that is currently unseen.

Exploratory analyses revealed that the AFF dimension was weakly positively correlated with MOA-Low. According to the scoring explanations for each system, this relationship suggests that those who appear more pathological (lower scores) on the AFF dimension also tend to have healthier (lowest low scores) on MOA. Given the number of analyses performed, this weak correlation may be by chance. Additionally, differences in scaling (bland versus absence of scores) may explain some of this relationship that is difficult to explain theoretically. As seen in Table 7, the modal score for AFF was identical numerically to the bland/default score on three

out of the five TAT cards and still accounted for several scores on the remaining two cards (Possible bland/default score frequencies: Card 1: AFF = 18; Card 3BM: AFF = 10). It is possible that the prevalence of the AFF default score ("4") and the dearth of higher 5, 6, and 7 AFF scores in the sample (the highest sample score for AFF was 4.85) led to a correlation with MOA, such that those more likely to have a higher 'bland' AFF score were also more likely to have pathological (higher) scores on MOA. In other words, those who told TAT stories involving affective constriction in relationships were more likely to show greater levels of pathology on Rorschach percepts involving relationships.

Hypothesis 3

The third hypothesis posited that the Affective component should correlate negatively with MMPI scale F and Clinical Scales 1, 2, 3, 6, 7, and 8 because dimensions that measure feelings about oneself (e.g., SE and ICS) contributed to this component. Hypothesis 3 was not supported. However, exploratory analyses revealed a significant positive correlation between the Affective Component and the MMPI's L and K scales, suggesting that higher (and theoretically healthier or default) Affective scores were related to higher scores on MMPI scales related to presenting a positive image of oneself. Because few participants had pathologically high MMPI scale scores for L and K, higher Affective scores tended to correlate with healthy self-presentations that were not overly defensive and secretive about any personal flaws. On a related note, the SCORS-G Composite score was significantly positively correlated with MMPI K scale, and the relationship between the Composite score and L was trending toward significance. Thus, those with higher (and possibly 'blander') scores on the SCORS-G are more likely to present themselves in a positive manner with fewer flaws.

Hypotheses about the MMPI were formulated at the component level to be consistent with Stein et al.'s (2012) original paper that compared SCORS-G components to the PAI, NEO-FFI, WCST, and WASI. However, exploratory analyses revealed the underlying AFF, EIR, EIM, AGG, and SE dimensional contributions to the significant correlations seen at the component level. In other words, how one incorporates (or does not incorporate) affect, relational closeness, morality, and aggression management in their TAT stories reflects how they present themselves on the validity scales on the MMPI. Those with lower scores on defensiveness scales were more likely to reveal themes on TAT stories related to poorly-contained affect, tumultuous relationships, immoral behavior, and unrestrained aggression.

Additional exploratory analyses revealed that the SCORS-G Composite score was negatively correlated with MMPI Clinical Scale 1 (Hypochondriasis). Thus, those with higher composite scores tended to report fewer physical symptoms on the MMPI. Further analyses revealed that only one SCORS-G dimension was significantly related to MMPI Clinical Scale 1: AGG, suggesting that those reporting more aggressive relational themes on the TAT (i.e., have lower AGG scores) are more prone to reporting experiencing physical symptoms on the MMPI (as demonstrated by higher Scale 1 scores). Those who experience significant somaticizing of symptoms may be experiencing relationships as more aggressive and dangerous in nature, thus denying them an interpersonal coping outlet when they are distressed (Davanloo, 1990; Malan & Coughlin Della Selva, 2006).

Lastly, there was a significant negative correlation between SCORS-G Self-Esteem and MMPI Clinical Scale 6 (Paranoia). This finding suggests that those whose self-esteem is less-developed and less-stable are more likely to be vigilant against external threats than those whose self-esteem is more stable or more reflective of a self-compassionate stance. This finding is

consistent with research into self-esteem that emphasizes the role of comparison, vigilance, and the need to be 'better than others' in order to have a positive self-esteem. This tendency can be unstable and problematic in those whose positive self-evaluation stems from narcissism (Baumeister, Campbell, Krueger, & Vohs, 2003; Neff, 2011; Rhodewalt, Madrian, & Cheney, 1998). This type of vulnerable self-esteem would receive a lower score on the SCORS-G Self-Esteem scale. The higher scores on SE reflect a more self-compassionate stance towards the self, which is more realistic and does not require comparison to others to feel valuable (Neff, 2011). Thus, higher SE scores correlated with lower vigilance, as measured by MMPI Clinical Scale 6.

Hypothesis 4

Hypothesis 4 stated that the Affective component of the SCORS-G should correlate negatively with Clinical Scales 4 and 9 because dimensions that loaded on this component (including EIM and AGG) tap themes related to interpersonal relationships, morality, and aggression. Hypothesis 4 was not supported, and no significant correlations were noted between individual SCORS-G dimensions and Clinical Scales 4 and 9 in exploratory analyses. The high percentage of bland EIM and AGG described previously (see Table 7) may explain the lack of correlational relationship.

In addition to issues related to bland protocols, the heterogeneity of the Clinical Scales may account for the current (lack of) findings. For example, Clinical Scale 4 is comprised of several subscales (Harris & Lingoes, 1955), including Familial Discord and Authority Conflict, which may be more likely to correlate with AGG than other subscales (e.g., Social Imperturbability, Social Alienation, or Self-Alienation). Similarly, Clinical Scale 9 is comprised of a range of subscales: Amorality, Psychomotor Acceleration, Imperturbability, and Ego Inflation (Harris & Lingoes, 1955). It is possible that the variance attributable to certain MMPI

subscales (e.g., Self-Alienation and Psychomotor Acceleration) may obscure the relationship between the SCORS-G dimensions and more relevant subscales of Scales 4 (e.g., Familial Discord and Authority Conflict) and 9 (e.g., Amorality) Unfortunately, the Harris and Lingoes (1955) subscale data were not available for the current dataset.

Hypothesis 5

The fifth hypothesis stated that the Cognitive component of the SCORS-G would correlate positively with Picture Arrangement and Comprehension scores from the WAIS-R and WAIS-III. No support for this hypothesis was found, and exploratory analyses did not reveal any significant correlations between the WAIS scales and the SCORS-G Composite, Affective component, or any individual dimensions, apart from SE. Different measurement methods is one possible explanation for the broad lack of correlational relationships, especially since the WAIS is a structured cognitive performance task with right and wrong answers, whereas the TAT is a somewhat ambiguous personality performance task with no 'correct' answers (Bram & Peebles, 2014, pg. 62).

Teglasi and colleagues refined and expanded on this explanation by highlighting the difference between "maximal" and "typical" measures (Annotti & Teglasi, 2017; Teglasi, Ritzau, Sanders, Kim, & Scott, 2017). Specifically, they found that "maximal" measures that have well-defined expectations and clear right and wrong answers tend to correlate highly with other maximal measures (e.g., WAIS) but not with so-called "typical" measures (e.g., TAT; less-defined expectations; multiple correct answers). In other words, the type of measure (maximal vs. typical) significantly impacts how correlated measures of the same construct may be. Even if measuring the same construct, participants in maximal testing contexts may understand the task at hand as different than the "typical" task to create a narrative for a TAT card, and this

difference in how participants understand the task influences the quality of the resulting data. This distinction may speak to the differences in responses that various test structures and modalities (written narrative vs. verbally articulated social rules) may have, with narratives potentially tapping more implicit relational themes and structured questions pulling for declarative knowledge based on explicit memory (McClelland, Koestner, & Weinberger, 1989; Schultheiss, 2007).

Although the significant relationship between WAIS-PA and Self-Esteem may be a due to chance, both scales require accurate appraisal of characters in order to obtain a high score. Picture arrangement requires one to realistically appraise a depicted situation (including characters) in order to place story cards in order of occurrence. SCORS-G SE scoring criteria award higher scores for realistic feelings about oneself (as implied by TAT narrative characters' feelings about themselves; Stein & Slavin-Mulford, 2018, p. 249). Less realistic self-appraisals, positive or negative, earn lower, more pathological scores. Although future research is needed to clarify the nature of the relationship between these two variables, it is possible that the common construct being measured by both scales is the ability to accurately evaluate individuals.

Hypothesis 6

An important goal of this dissertation was to explore the clinical utility of the SCORS-G as it relates to trauma and violence history. Hypothesis 6 stated that the SCORS-G Affective Component would discriminate the participant group with a history of violent relationships from the groups with problematic but nonviolent relationships and non-problematic relationships. Although the SCORS-G discriminated amongst the groups, it differentiated different groups with a different component than hypothesized. This hypothesis was not supported because it was the Cognitive Component that significantly discriminated the nonproblematic group from the two

groups that were reporting a history of problematic relationships. Although the Affective Component assisted the overall DFA in discriminating problematic nonviolent relationships from nonproblematic and violent relationships, it only explained 14.6% of the variance.

This outcome may be explained by the fact that the Cognitive Component is comprised of SCORS-G dimensions that require individuals to accurately differentiate themselves from others in a manner that (1) appreciates others in an integrated way with distinct needs, wants, and desires, and (2) understands aspects of social causality accurately and reasonably without misattributing intention or impact of behaviors. These developmental skills are critical in order to discriminate between broadly healthy vs. unhealthy relationships. Those with a history of unhealthy relationships or personality disturbance may have been unable to meet these developmental milestones. As a result, they continue to repeat problematic relational patterns because they are unable to see the difference between 'good' and 'bad' relationships (Stein & Slavin-Mulford, 2018).

Overall, the DFA model correctly classified 63.2% of violent and problematic nonviolent relationships and 58.3% of nonproblematic relationships. The pattern of classification suggests that the SCORS-G is more likely to commit a false alarm error (false positive suggesting a violent or problematic relationship type) than to miss (false negative) the presence of problematic relationship patterns. Thus, in research and clinical practice, it will be necessary to use additional sources of data before asserting that a patient or research participant has a history of violent or problematic relationships. However, the SCORS-G can highlight an important area for clinical exploration, especially if a patient neglected to mention a history of relational problems in an initial intake.

An exploratory discriminant function analysis with all of the SCORS-G dimensions was also run. This particular DFA was better able to predict group membership than the DFA using the components found in the PCA. It correctly discriminated among the groups such that 75% of nonproblematic, 63.2% of problematic, and 68.4% of violent group members were correctly classified. One finding of clinical importance was that zero individuals in the violent group and only one individual from the problematic group were incorrectly identified as having been in the nonproblematic group. Based on these results, the SCORS-G is better at detecting broad relational health than discriminating a specific type of relational problem. It is important to compare this finding to the findings of Jenkins, Dobbs, and Leeper (2015) using the same sample. In this study, TAT stories scored using Feffer's Interpersonal Decentering scoring system (Feffer, 1966; Feffer et al., 2008) for the same sample of TAT stories found significant differences in mentalizing or decentering ability depending on violence group. Unlike the current study, Jenkins, Dobbs, and Leeper (2015) differentiated those who were victims of violence versus those who were perpetrators, whereas this study combined them for theoretical and sample size reasons. Given the differences in ability to mentalize amongst the violence groups found by Jenkins, Dobbs, and Leeper (2015), future research may benefit from separating victims and perpetrators of violence in order to identify any additional nuanced differences that exist between these two groups.

The correlations between outcomes and discriminant functions revealed that the Understanding of Social Causality (SC) and Identity and Coherence of Self (ICS) loaded more highly on the function that was able to discriminate clients with apparent non-problematic relationships from those with problematic nonviolent and violent relationships. Accurate understanding of social situations without misattributing intent is important for discriminating

between healthy and unhealthy relationships. Additionally, Identity and Coherence of Self (ICS), which scores how fragmented or integrated one's story characters are, may also suggest how integrated or unstable and unpredictable participants understood their characters to be. Those whose stories contained characters who tended to have emotions that fluctuated unpredictably or a sense of self that was poorly defined also tended to be those people who were in problematic relationships, either violent or nonviolent. Kernberg's description of individuals with borderline pathology would seem to support this particular outcome, as he described with two aspects of borderline pathology as being identity diffusion and reality testing/reasoning disturbance, which may map onto identity and coherence of self and understanding of social causality, respectively (Clarkin, Yeomans, & Kernberg, 2006).

The discriminant function analyses highlighted a trend in the hypothesis testing, namely, that relying on the two SCORS-G components did not clarify or simplify the resulting correlational analyses. Unlike Stein et al. (2012), using the components instead of the individual dimensions seemed to obscure significant and interpretable findings in the current sample. The exploratory DFA using all individual SCORS-G dimensions was more accurate at discriminating participants based on relationship group. In the bivariate correlational analyses, significant component or composite scores were not immediately interpretable; it was still necessary to analyze the individual dimensions' correlations to each other measure to clarify the nature of the relationships. Thus, simply analyzing individual dimension scores proved more useful, with respect to significance and interpretability, than relying on component scores.

Hypothesis 7

Hypothesis 7 proposed that for participants in the violent relationship group, SCORS-G dimension scores for stories told to relationship cards (4, 13MF) would be significantly lower

than scores on non-relationship card stories (1, 2, 3BM). The Wilcoxon matched-pair signed rank test was used to test this hypothesis, and within the violent relationship group, the AGG dimension and SCORS-G Composite scores were significantly lower (i.e., more primitive) on relationship cards than on non-relationship cards. This finding suggests that those participants with a history of violent relationships, not surprisingly, incorporated more primitive violent themes in their stories for cards suggesting romantic heterosexual relationships than for cards that did not pull for such relationships.

Card pull has been an increasing area of interest in TAT research (Cramer, 2017; Jenkins, Siefert, & Weber, 2019; Stein, Slavin-Mulford, Siefert, Sinclair, Renna, Malone, Bello, & Blais, 2014; Siefert et al., 2016). Past research in this area has suggested that Cards 3BM and 13MF (both cards were used in this study) pull for the most negative or pathological object representations in stories scored with the SCORS-G. Card 2 pulled for the healthiest SCORS-G scores (Stein et al., 2014). In the current study, the less romantically cued relationship pictures (including Card 2) do not depict people interacting or in a situation that suggests any required level of emotional intimacy. The relationship cards in this study are quite the opposite, being identified as having heterosexual romantic card pull (Jenkins, Siefert, & Weber, 2019). In Card 4, the main male and female characters are touching, and in Card 13MF, the male and female characters are displayed in a bedroom with the woman in a state of undress, suggesting some level of either familiarity/ intimacy or intrusiveness/ boundary violation by the male depicted. Given the incorporation of violence into the expectation of intimacy and relatedness in the relational templates of those with a history of violent relationships (Prior, 2004), those with a history of violent relationships are more likely to have primitive aggressive themes emerge in their relationship stories than in stories that do not pull for close relational themes. Because the

AGG dimension contributes to the overall Composite scale, it is likely that this dimension is what contributed to the significant Composite score, as no other dimension revealed differences in object relations quality.

Additional Contributions to the Literature

In addition to the findings reported above, this dissertation is rare in SCORS-G research, as it controlled for story length as systematic measurement error. While research into human social motives (e.g., McClelland, 1980) and Feffer's Interpersonal Decentering scoring system (Feffer et al., 2008; Jenkins, Dobbs, & Leeper, 2015) has recognized the importance of controlling for the effect of story length on TAT-based scores, the SCORS-G literature has often overlooked this source of error. The hypotheses generated for this study were based on findings from this SCORS-G literature. However, it was discovered that story length significantly correlated with a number of SCORS-G dimensions and needed to be controlled for in the hypothesis testing. For example, story length mediated the relationship between the Cognitive Component and MOA-path, and controlling for story length resulted in this relationship being non-significant. Additionally, prior to controlling for story length, the Affective Component was significantly negatively correlated to MMPI Scales 1, 4, and 8. Those relationships were also non-significant after controlling for story length. While further research is warranted to explore how story length relates to variables such as defensiveness, resistance to testing, VIQ, and cognitive complexity, the current study's findings suggest that it is necessary to control for the impact of response productivity (TAT story length) as a source of method error variance before drawing conclusions about the relationship of TAT variables to other measures or constructs.

Limitations

Despite the contributions this dissertation will make to the psychological assessment literature, including filling gaps in the knowledge base related to how the SCORS-G relates to well-established measures (MMPI, MOA, and WAIS), there are a few significant limitations to this study that warrant exploration. First and foremost, the SCORS-G is a scale that rates aspects of the self and relationships on a scale from 1 through 7. However, in the current outpatient sample, very few individuals' stories were ever rated a 6 or 7, and many scores were 3 or 4. Thus, our current sample and results do not capture the entire range of SCORS-G scores, and interpretations of the findings may be limited to those in the lower range of SCORS-G scores. Lower ranges of scores may simply be indicative of a clinical sample, but further studies of nonclinical samples with improved object relational functioning may be helpful to round out understanding of the relationship between the SCORS-G and the measures used in this study.

A considerable limitation of the current study is the aforementioned lack of distinction between default and meaningful SCORS-G scores. As presented by Stein et al. (2019), seven out of the eight dimension scales include a default placeholder score for stories to be scored "absent, bland, or limited" on a dimension. Unfortunately, the numerical value of the default scores varies amongst the scales (2, 4, or 5). Additionally, because the default scores are in the middle of the scale, it is possible for a dimension score to be assigned that is numerically identical to the default score but is not assigned by default. For example, if a story does not meet criteria to earn a score of 5 on AFF but is more advanced that what is represented by a score of 3, a 4 would be assigned to represent the story falling between the 3 and 5 anchors. Thus, the same number of 4 on the AFF scale could represent something meaningful about a client's object representations or it could simply be a default placeholder. As a result of this problem, Stein et al. (2019)

recommended using a new scoring protocol that specifically indicates whether assigned scores are assigned by default. Unfortunately, the stories for the current study were already coded without designating default status before Stein et al.'s (2019) presentation. Given the large number of scores assigned to this study's TAT stories that are identical to default scores, bland or default 'placeholder' scores are influencing the current study's results, and they are indistinguishable from identical scores that are theoretically meaningful. Thus, default scores were not able to be removed from the current analyses. However, future researchers would be wise to designate and code when scores they are assigning are bland or default scores so they may exclude them from analyses to evaluate their impact.

Another limitation of the current study is the fact that the original assessments included some older measures than are administered currently, including the original MMPI, WAIS-R, and WAIS-III. Although Comprehension is a current subtest of the WAIS-IV, Picture Arrangement is no longer included in the Wechsler series. One possible option to improve the current study would be to compare SCORS-G scores to performance on the Wechsler Advanced Clinical Solutions Social Cognition measure, which includes subtests that explore social perception and theory of mind (Social Perception subtest; Pearson, 2009). Although Rapaport, Schafer, Gill, & Holt (1968) identified Picture Arrangement as a measure of social cognition, the ACS-SP subtest may be a better, more current, measure of this construct. Additionally, the Comprehension scale includes questions tapping not only understanding of social situations, but also cultural norms and abstract political or social concepts that may not directly map onto interpersonal functioning. In summation, updating the tests used in the current study may be beneficial in future studies.

In addition to the possible challenges posed by the use of older measures, the lack of significant relationships between the SCORS-G and measures that purport to measure similar constructs may be due to different measurement methods (Annotti & Teglasi, 2017; Bornstein 2009; Bram & Peebles, 2014; McClelland, Koestner, & Weinberger, 1989). According to Bornstein (2009, 2011), the measures may correlate weakly because the process of formulating a response to these types of tests is so different. Comparing two performance-based measures of object relations may yield stronger correlations due to the similar response type, hence the expectation that the Rorschach and TAT measures of object relations would be related in a meaningful way. However, Bram & Peebles (2014, p. 37) pointed out that even though the Rorschach and TAT are both "ambiguous-demand" measures, the Rorschach's level of ambiguity, with respect to task and stimuli, is greater than the level of ambiguity in the TAT stimuli and task. For example, the Rorschach question, "What might this be?" is much more open than the TAT instructions, "Tell me a story with a beginning, middle, and end that also tells how the characters are thinking and feeling." Additionally, the appropriate response to the Rorschach prompt is much briefer and less structured than an appropriate TAT response. In the TAT instructions, one finds specific information about how to construct an appropriate response, including landmarks for the requested narrative. However, the demands on executive functioning are much greater on the TAT due to the increased complexity of generating a narrative. These differences alone may impede comparisons of object relations functioning across the different measures, as one system (TAT) instructs test takers to directly engage with characters and characters' internal psychological worlds. The instructions include an explicit request that narratives will include information relevant to the test taker's object representations. The other system (Rorschach) lets the test taker decide whether or not they will engage with the test stimuli

in a manner that produces data to interpret (movement responses) on the MOA scale. Due to the differences in testing conditions, the demands on executive functioning, and the difference in ways test takers would approach each task, SCORS-G and MOA may simply not correlate with one another.

Another limitation in the current study is the forms of error variance inherent in coding relationship groups from the information provided in clinic files. That is, the only information available to sort participants by relationship type was usually their own report to their assessor in the context of assessment, intake, therapy, and termination report. However, collateral information, including police, court, and/or prison records were not available for the current sample, so it is possible that some aspects of participants' histories were not reported or available in the clinic files. Although the SCORS-G was able to correctly discriminate amongst the relationship groups in the study at a respectable level, it would have been helpful to have had additional verification of the participants' relationship group. This is particularly true given the small group of individuals who were identified as having a history of violence (n = 19). This relatively limited sample of individuals with such a history, including the very small number of individuals who claimed to have a history of both victimization and victimizing (n = 5), makes it difficult to make definitive predictions about how individuals with a history of violence will appear on the SCORS-G, despite promising initial results in the current study. Combining victims and perpetrators of violence into one group, although justified by theory (Prior, 2004), increased the heterogeneity of the violent relationship group and may have overlooked possible significant differences in the object representations of victims and perpetrators.

Lastly, in order to have approximately equal relationship groups in the DFA, participants reporting 'absence of relationships' were not included in this analysis. However, several

sociological researchers would suggest that those presenting to therapy complaining of the lack of relationships or loneliness are presenting with a serious concern that is plaguing a significant portion of the population (Brown, 2018; Putnam, 2000; Turkle, 2011). Although the lonely population is an important group for study, the current study does not provide much in the way of insight into the object relational contributions or consequences of a lack of relationships.

Future Research

The limitations of this study provide some of the interesting avenues for further study. One particularly fruitful area of research may be investigations that allow for the removal of default SCORS-G scores from future analyses. Identifying default scores as such during the scoring process allows researchers to separate the wheat from the chaff at the point of analysis. In other words, ensuring that only meaningful scores that are related to participants' object representations are included in analyses would eliminate a considerable source of noise in the SCORS-G data. In addition to simply eliminating default scores as noise, further investigation into the underlying reasons for default scores may be fruitful. For example, there may be clinically useful distinctions between individuals who tend to tell impoverished stories and receive default scores on most dimensions vs. an individual who receives a default score on one or two dimensions due to a defensive restriction of affect or aggression in stories. Future research may consider differentiating those who tend to tell impoverished stories from those whose default or bland scores may be clinically relevant.

Additionally, research into the impact of TAT card pull on SCORS-G scores is in its infancy. The current study demonstrated that heterosexual romantic cards tend to pull for different object relational themes in narratives from participants with a history of relational violence than non-romantic cards. As suggested in Jenkins, Siefert, and Weber (2019), TAT

cards are “analogs for life situations,” and getting an overall sense of participants’ internal object worlds would require appropriate sampling of various life situations (Jenkins, 2017). Although clinics such as Austen Riggs and the historical Menninger Clinic in Topeka have had a stable set of TAT cards that are administered to every patient (A. Bram, personal communication, February 2019), most clinicians modify which cards they administer based on the patient’s presenting problems and how different cards may pull for themes that are relevant to the patient (e.g., administering cards 4, 10, and 13MF to a patient who presents with depression in the context of marital conflict). Future research into which cards pull for which life situations may assist clinicians in picking a set of cards that appropriately sample an adequate number of life situations in order to make informed assessments of their patients’ object relational health.

Lastly, there are additional exciting opportunities for further SCORS-G research in exploring the use as a measure for therapeutic change. Ideally, therapeutic change from a dynamic perspective involves the development of more mature defenses, more satisfying relationships, and greater insight into oneself (Shedler, 2010). Because the SCORS-G is able to tap into the quality of one’s object relational functioning in a variety of areas, it may be an ideal measure to assess the progress of one’s intrapsychic development as therapy progresses.

Clinical Implications

In addition to clarifying avenues for future research, this dissertation contributes findings to the literature that have implications for clinical practice. These implications include the utility of interpreting the SCORS-G at a component versus dimension level, considerations for card selection, and concerns related to interpreting default scores. With respect to interpreting component versus dimension scores, the current study revealed that interpreting scores at a dimension level helps when trying to discriminate amongst groups. For example, while it is

helpful to know broadly that the SCORS-G cognitive component discriminates between those with a history of relationship problems and those without, recognizing that it is the patient's understanding of social cognition (SC) and his or her identity and self-coherence (ICS) that drives this ability to discriminate between the groups allows clinicians to focus on the most relevant dimensions. That is, more pathological scores on SC and ICS may be indicators of relational problems that can round out the clinical picture of an individual's presenting problems. For example, if patients downplay the role of relationships in their problems, but they struggle to make sense of why people act the way they do, perceive social situations incorrectly, and lack a stable, coherent sense of who they are, it will be important for clinicians to consider the impact these deficits have on the patients' relationships, regardless of the emphasis patients place on relational problems.

A second implication for clinical practice is related to card selection. The current study demonstrated further evidence that TAT cards sample life situations (Jenkins, Siefert, & Weber, 2019), and that those with a history of violence in relationships are likely to show more pathologically aggressive themes (AGG) and poorer overall object relational health (Composite) on cards that pull for closer, romantic relationships than cards depicting only one person or cards that do not typically pull for heterosexual romantic themes. In other words, the quality of object relational health depicted in stories varies with the context of the card, so it is important for clinicians to choose their cards wisely to ensure they are sampling an adequate number of situation types to see where their patients' strengths and weaknesses lie.

Lastly, this study provided further evidence for the importance of documenting default scores. In a broad clinical context, it is always important to be mindful about why one is assigning a score to a story and to make sure to contextualize the score based on factors such as

patient history, card pull, etc. Furthermore, it is problematic to base clinical assertions on a single test score, and as suggested by the findings related to SCORS-G score differences on cards with different relational pulls, it is important to adequately sample a variety of life situations in order to investigate the conditions under which certain relational or pathological themes emerge. With respect to default scores, this study supports a mindful approach to interpreting bland or default scores. A weakness of the study was that it was impossible to tell whether a score that was numerically identical to a default score was truly scored as default. It is important to recognize when a score is truly bland versus when a score is a meaningful middle ground between two scale anchors. Additionally, even if the score is bland in nature, it is important to consider context to determine whether bland scores are occurring in the context of an impoverished narrative, or if isolated bland scores are a sign of a defense against certain affects or distressing situations stimulated by the nature of the TAT card. Thus, where bland or default scores occur and how they occur may offer clinically-relevant clues as to how patients cope with emotions, when they are likely to engage in avoidance, and what situations may help them to reengage emotionally.

Conclusion

Broadly speaking, the purpose of this dissertation was to provide evidence in support of the use of psychodynamically-informed assessments and to investigate the psychometric properties of the SCORS-G. The results of this study provided more evidence of a 2-component solution for the SCORS-G, but it also cast doubt on whether components are always helpful for clarifying the relationship between SCORS-G data and other assessment measures. This dissertation also filled a gap in the literature by assessing how the SCORS-G relates to well-established measures, including the WAIS, MMPI, and MOA scales. It also provided clinically-

relevant information about the ability of the SCORS-G to discriminate those with a history of violent or problematic relationships from those who do not have such histories. Lastly, it revealed the importance of card pull in the selection of cards for sampling the object relational health of those with a history of violent relationships.

It is my hope that the findings of this dissertation may prove useful not only to researchers, but to clinicians as well (and by extension to patients). Given the amount of information tools like the SCORS-G provide about our patients and how they relate to themselves and others, it can be easy to forget how foreign that information may feel to patients who find themselves in our consulting rooms. Similar to Dorothy's arrival in Oz, they are entering a new environment when they embark on an assessment or therapy journey with us. This new environment has new rules and offers a new and different kind of relationship compared to those they may have had elsewhere. Yet, our patients still arrive with expectations about how relationships unfold, and these expectations influence our work with them starting from day one. The SCORS-G and psychodynamically-informed assessments can reveal whether our patients expect 'good witches' or 'bad witches' to populate their worlds, metaphorically speaking, and they may provide us with important clues as to how the work we do may be of use to them. In this way, we can help our patients embark on the journey to face the 'bad witches' in their lives and histories, learn how to find support in others along the way, and eventually find their way home.

Table 1

Study Sample Age and Education Data

Demographic Variable	*M*	*SD*	*Skew*	*Kurtosis*	*Min-Max*
Age	28.84	8.35	0.69	-0.47	16-48
Education	13.51	1.80	0.09	0.19	9-18

Table 2

Study Sample Gender, Ethnicity, and Relationship Group Data

Demographic Variable	*N*	% of Sample
Gender (Binary)		
Male	39	48.10
Female	42	51.90
Ethnicity		
Black	6	7.40
White European	62	76.50
Hispanic/ Latino	7	8.60
Multiracial/ Multiethnic	1	1.20
Not Reported	5	6.20
Relationship Group	50	100.00
Non-Problematic	12	24.00
Problematic Nonviolent	19	38.00
Violent	19	38.00
Violent-as perpetrator	8	16.00
Violent- as victim	6	12.00
Violent- as both perpetrator and victim	5	10.00

Table 3

MOA, MMPI-2, and WAIS subtest means and standard deviations.

Scale	*M*	*SD*	*Skew*	*Kurtosis*	*Min-Max*
SCORS-G Dimensions					
COM	3.07	0.49	0.63	1.26	1.85-4.65
AFF	3.48	0.45	0.28	0.48	2.40-4.85
EIR	2.88	0.46	0.48	-0.06	1.95-4.15
EIM	3.81	0.35	-0.93	0.69	2.85-4.55
SC	2.99	0.53	0.33	0.07	1.95-4.50
AGG	3.58	0.43	-0.57	-0.16	2.35-4.40
SE	3.85	0.32	-1.00	1.18	2.85-4.55
ICS	4.71	0.40	-1.00	0.63	3.50-5.30
Composite	3.55	0.25	0.01	-0.36	3.04-4.09
Mutuality of Autonomy (MOA; *N* = 80)					
MOA-mean	3.72	0.74	0.13	0.55	1.50- 5.56
MOA-path	2.83	2.13	1.28	2.23	0.00- 11.00
MOA-H	5.83	0.90	-1.26	3.32	2.00- 7.00
MOA-L	1.83	0.85	1.35	2.41	1.00- 5.00
MMPI Validity Scales (*N* = 73)					
Lie (L)	50.52	9.20	0.65	-0.68	38.00-72.00
F	64.23	18.37	0.80	0.24	37.00-120.00
K	46.79	10.02	0.56	0.14	30.00-77.00

Scale	*M*	*SD*	*Skew*	*Kurtosis*	*Min-Max*
MMPI Clinical Scales (*N* = 73)					
Scale 1 (Hs)	55.25	12.55	0.55	0.5	32.00-88.00
Scale 2 (D)	63.40	15.94	0.36	-0.91	39.00-95.00
Scale 3 (Hy)	57.48	12.06	0.90	1.08	35.00-93.00
Scale 4 (Pd)	64.29	14.56	0.20	0.03	30.00-104.00
Scale 5 (Mf)	52.95	12.42	0.07	-0.44	27.00-80.00
Scale 6 (Pa)	62.23	13.72	0.43	-0.00	34.00-97.00
Scale 7 (Pt)	64.18	17.81	0.32	-0.74	30.00-100.00
Scale 8 (Sc)	65.79	18.37	0.14	-0.87	30.00-101.00
Scale 9 (Ma)	55.16	13.70	1.12	2.00	30.00-107.00
Scale 0 (Si)	55.88	11.90	0.26	-0.91	34.00-80.00
WAIS (*N* = 76)					
Comprehension	11.13	2.77	0.43	0.12	5.00-19.00
Picture Arrangement	10.58	2.91	0.29	-0.13	4.00-17.00

Table 4

Card Data Word Count

TAT Card	*N*	*M*	*SD*	Skew	Kurtosis	Min-Max
Card 1	79	73.56	48.90	1.73	3.34	14-253
Card 2	78	94.64	61.53	1.20	1.08	13-288
Card 3BM	75	69.75	50.87	2.77	10.62	14-318
Card 4	75	80.79	58.69	2.40	7.63	18-349
Card 13MF	77	93.64	90.81	3.29	13.10	16-577

Table 5

Variable Relationships Controlled for in Analyses

Demographic Variable	Variable of Interest	*r*	*p*
Age	MMPI Scale 9	-0.21	0.07
Age	WAIS- PA	-0.22	0.05
Age	Relationship Violence	0.27	0.04
Education	MOA-path	0.21	0.08
Education	MMPI Scale 9	-0.23	0.06
Education	Relationship Violence	-0.20	0.14
Gender[a]	MMPI Lie Scale	0.20	0.09
Gender[a]	MMPI Scale 5	-0.23	0.05
Gender[a]	MMPI Scale 6	-0.22	0.06
Gender[a]	MMPI Scale 8	-0.26	0.03
Ethnicity[b]	SCORS-G AGG	-0.20	0.08

[a] coded: 0 = men, 1 = women. [b] coded: 1 = Black, 2 = Native Alaskan, 3 = Asian, 4 = White European, 5 = Hispanic, 6 = Multiethnic, 7 = Other. Note: Because SCORS-G AGG is represented in the SCORS-G Composite and SCORS-G Affective component, these variables are also controlled for ethnicity.

Table 6

SCORS-G Dimension Correlation Matrix- All Cards

	COM	AFF	EIR	EIM	SC	AGG	SE	ICS	Global
COM	--								
AFF	-0.02	--							
EIR	0.41**	0.53**	--						
EIM	0.07	0.61**	0.54**	--					
SC	0.87**	-0.07	0.33**	-0.02	--				
AGG	-0.23*	0.64**	0.21	0.51**	-0.29**	--			
SE	-0.09	0.54**	0.28*	0.32**	-0.11	0.32**	--		
ICS	-0.23	0.61**	0.32**	0.51**	-0.17	0.37**	0.53**	--	
Global	0.47**	0.77**	0.78**	0.71**	0.42**	0.49**	0.52**	0.56**	--

Note: * denotes significance at p<.05 level. ** indicates significance at p<.01 level.

Table 7

SCORS-G Dimension 'Default' and Default-Identical Score Frequencies and Modal Scores

	Card 1		Card 2		Card 3BM		Card 4		Card 13MF	
Dimension	Freq	Mode	Freq	Mode	Freq	Mode	Freq	Mode	Freq	Mode
AFF	18	3.55	39	4.00*	10	3.00	22	4.00*	20	4.00*
EIR	5	2.50	5	3.00	29	2.00*	6	3.00	4	3.00
EIM	59	4.00*	52	4.00*	54	4.00*	41	4.00*	39	4.00*
SC	3	3.05	5	2.75	3	3.00	9	3.00	4	3.00
AGG	47	4.00*	67	4.00*	53	4.00*	36	4.00*	45	4.00*
SE	61	4.00*	56	4.00*	52	4.00*	59	4.00*	53	4.00*
ICS	48	5.00*	32	5.00*	39	5.00*	58	5.00*	30	5.00*

Note: Freq= Frequency of default of default-identical scores' occurrence in *N*= 81 sample. Mode = modal score assigned to the dimension. Asterisks denote a modal score that is the same numerically as a default score. COM was not included because there is no identified "default" or "absent, bland, or limited" score for this dimension.

Table 8

Interrater Reliability and Internal Consistency data for the SCORS-G

SCORS-G Dimensions	*M*	*SD*	ICC (S)	ICC (A)	Card Alpha	Rater Alpha
COM	3.07	0.49	0.80	0.94	0.79	0.95
AFF	3.48	0.45	0.78	0.93	0.49	0.94
EIR	2.88	0.46	0.69	0.90	0.31	0.91
EIM	3.81	0.35	0.61	0.86	0.33	0.87
SC	2.99	0.53	0.65	0.88	0.81	0.89
AGG	3.58	0.43	0.85	0.96	0.26	0.96
SE	3.85	0.32	0.77	0.93	0.37	0.93
ICS	4.71	0.40	0.76	0.93	0.26	0.93
Global	3.55	0.25	0.86	0.96	0.41	-

Note: Card alpha refers to between-card alphas. Rater alpha refers to between-rater alphas.

Table 9

Principal Component Analysis of SCORS-G with Varimax Rotation

SCORS-G Dimension	Rotated Components		h^2
	1	2	
Complexity of Representations of People (COM)	-.09	.95	.91
Affective Quality of Representations (AFF)	.89	.05	.80
Emotional Investment in Relationships (EIR)	.61	.58	.70
Emotional Investment in Values and Moral Standards (EIM)	.79	.17	.65
Understanding of Social Cognition (SC)	-.14	.92	.87
Experience and Management of Aggressive Impulses (AGG)	.70	-.25	.56
Self-Esteem (SE)	.66	-.08	.45
Identity and Coherence of Self (ICS)	.77	-.15	.61

SCORS-G Dimension	Rotated Components		h^2
	1	2	
Initial Eigenvalues	3.34	2.21	
Initial % of Variance Explained	41.71	27.56	
Post-Rotation Eigenvalues	3.34	2.21	
Post-Rotation % of Variance Explained	41.70	27.57	

Table 10

Principal Component Analysis of SCORS-G with Varimax Rotation, Omitting EIR

SCORS-G Dimension	Rotated Components		h^2
	1	2	
Complexity of Representations of People (COM)	-.04	.97	.94
Affective Quality of Representations (AFF)	.90	.02	.80
Emotional Investment in Values and Moral Standards (EIM)	.79	.13	.63
Understanding of Social Cognition (SC)	-.09	.96	.92
Experience and Management of Aggressive Impulses (AGG)	.71	-.25	.57
Self-Esteem (SE)	.68	-.07	.47
Identity and Coherence of Self (ICS)	.77	-.16	.62
Initial Eigenvalues	3.11	1.84	
Initial % of Variance Explained	44.37	26.31	
Post-Rotation Eigenvalues	3.00	1.96	
Post-Rotation % of Variance Explained	42.75	27.93	

Table 11

Principal Component Analysis of SCORS-G with Varimax Rotation, Controlling for TAT Story Word Count

SCORS-G Dimension	Rotated Components		h^2
	1	2	
Complexity of Representations of People (COM)	-.01	.93	.86
Affective Quality of Representations (AFF)	.90	-.03	.82
Emotional Investment in Relationships (EIR)	.64	.51	.67
Emotional Investment in Values and Moral Standards (EIM)	.78	.24	.66
Understanding of Social Cognition (SC)	-.10	.90	.82
Experience and Management of Aggressive Impulses (AGG)	.71	-.26	.57
Self-Esteem (SE)	.66	-.02	.43
Identity and Coherence of Self (ICS)	.76	-.50	.59
Initial Eigenvalues	3.37	2.05	
Initial % of Variance Explained	42.08	25.56	
Post-Rotation Eigenvalues	3.35	2.07	
Post-Rotation % of Variance Explained	41.83	25.81	

Table 12

Principal Component Analysis of SCORS-G with Varimax Rotation, Controlling for TAT Story Word Count, Omitting EIR

SCORS-G Dimension	Rotated Components 1	2	h^2
Complexity of Representations of People (COM)	.02	.94	.88
Affective Quality of Representations (AFF)	.90	-.05	.81
Emotional Investment in Values and Moral Standards (EIM)	.77	.22	.65
Understanding of Social Cognition (SC)	-.06	.93	.86
Experience and Management of Aggressive Impulses (AGG)	.72	-.26	.58
Self-Esteem (SE)	.68	-.00	.46
Identity and Coherence of Self (ICS)	.78	-.04	.61
Initial Eigenvalues	3.00	1.84	
Initial % of Variance Explained	42.91	26.33	
Post-Rotation Eigenvalues	2.99	1.86	
Post-Rotation % of Variance Explained	42.69	26.55	

Table 13

Correlations of SCORS-G Components and Composite Score with MOA, MMPI-2, and WAIS Measures

Concurrent Scale	SCORS-G Composite		Component 1 Affective		Component 2 Cognitive	
	r	*p*	*r*	*p*	*r*	*p*
Object Relations Scales						
MOA-mean	0.00	0.98	0.02	0.89	-0.04	0.74
MOA-path	-0.08	0.54	-0.05	0.68	0.02	0.85
MOA-High	0.04	0.73	0.01	0.91	0.10	0.39
MOA-Low	0.15	0.21	0.13	0.24	-0.02	0.84
MMPI Scales						
Validity Scales						
L	0.22	0.07	0.27	0.02	-0.17	0.17
F	-0.23	0.06	-0.19	0.12	-0.18	0.13
K	-0.36	<0.01	0.35	<0.01	0.04	0.71
Clinical Scales						
Scale 1 (Hs)	-0.24	0.05	-0.19	0.12	-0.11	0.35
Scale 2 (D)	-0.05	0.71	0.01	0.94	-0.05	0.66
Scale 3 (Hy)	-0.10	0.44	-0.05	0.66	-0.04	0.74
Scale 4 (Pd)	-0.12	0.33	-0.07	0.57	-0.06	0.62
Scale 5 (Mf)	-0.02	0.85	-0.06	0.61	0.03	0.79
Scale 6 (Pa)	-0.07	0.60	-0.05	0.70	-0.10	0.40
Scale 7 (Pt)	-0.08	0.54	0.01	0.95	0.08	0.53
Scale 8 (Sc)	-0.07	0.59	-0.08	0.51	-0.03	0.83
Scale 9 (Ma)	0.00	0.99	-0.06	0.65	0.14	0.28
Scale 0 (Si)	0.06	0.66	0.06	0.60	-0.11	0.38

Social Cognition Scales						
WAIS Picture Arrangement (PA)	0.05	0.70	0.10	0.42	0.03	0.78
WAIS Comprehension (CO)	0.06	0.64	0.05	0.68	0.12	0.30

Note: All analyses are controlled for story length. Analyses with WAIS PA controlled for Age; Component 1 and Composite controlled for ethnicity, MOA-path controlled for education; MOA; Composite controlled for ethnicity. MMPI Clinical Scales are raw (not K-corrected). Analyses with Scale 6 and 8 controlled for gender; Scale 9 controlled for age and education.

Table 14

Correlations of SCORS-G Dimensions with MOA, MMPI-2, and WAIS Measures

Concurrent Scale	COM		AFF		EIR		EIM	
	r	*p*	*r*	*p*	*r*	*p*	*r*	*p*
Object Relations Scales								
MOA-mean	-0.13	0.27	0.05	0.65	0.16	0.17	0.05	0.68
MOA-path	-0.01	0.93	-0.03	0.81	0.05	0.66	0.04	0.72
MOA-High	0.03	0.82	-0.03	0.80	0.12	0.28	0.11	0.34
MOA-Low	-0.02	0.87	0.23	0.04	0.19	0.10	0.03	0.82
MMPI Scales								
Validity Scales								
L	-0.16	0.18	0.31	0.01	0.21	0.08	0.09	0.45
F	-0.16	0.19	-0.19	0.11	-0.09	0.44	-0.08	0.51
K	-0.01	0.94	0.40	<0.01	0.34	<0.01	0.26	0.03
Clinical Scales								
Scale 1 (Hs)	-0.13	0.26	-0.19	0.11	-0.12	0.32	-0.14	0.24
Scale 2 (D)	-0.07	0.58	0.02	0.88	0.07	0.54	0.15	0.22
Scale 3 (Hy)	-0.07	0.57	0.00	1.00	-0.09	0.47	-0.04	0.74
Scale 4 (Pd)	-0.06	0.64	-0.00	0.98	0.01	0.95	0.02	0.86
Scale 5 (Mf)	0.02	0.89	0.12	0.30	-0.16	0.18	0.08	0.49
Scale 6 (Pa)	-0.09	0.47	0.04	0.74	0.05	0.69	0.06	0.65
Scale 7 (Pt)	0.05	0.67	0.07	0.55	0.18	0.13	0.12	0.33
Scale 8 (Sc)	-0.02	0.87	-0.01	0.92	0.10	0.43	-0.03	0.80
Scale 9 (Ma)	0.15	0.25	-0.06	0.66	0.09	0.50	0.02	0.87
Scale 0 (Si)	-0.06	0.60	0.07	0.59	0.16	0.18	0.11	0.35
Social Cognition Scales								
WAIS Picture Arrangement (PA)	-0.12	0.87	0.10	0.40	-0.08	0.49	-0.08	0.51
WAIS Comprehension (CO)	0.11	0.35	0.08	0.47	-0.05	0.70	0.02	0.85

Note: All analyses are controlled for story length. Analyses with WAIS PA controlled for Age; Component 1 and Composite controlled for ethnicity, MOA-path controlled for education; MOA; Composite controlled for ethnicity. MMPI Clinical Scales are raw (not K-corrected). Analyses with Scale 6 and 8 controlled for gender; Scale 9 controlled for age and education.

Table 15

Correlations of SCORS-G Dimensions with MOA, MMPI-2, and WAIS Measures (continued)

Concurrent Scale	SC		AGG		SE		ICS	
	r	*p*	*r*	*p*	*r*	*p*	*r*	*p*
Object Relations Scales								
MOA-mean	0.03	0.77	-0.03	0.83	-0.12	0.30	0.05	0.67
MOA-path	0.09	0.47	0.01	0.92	-0.09	0.46	-0.12	0.31
MOA-High	0.14	0.24	-0.09	0.45	-0.11	0.34	0.10	0.38
MOA-Low	-0.04	0.73	0.10	0.38	0.04	0.74	0.08	0.46
MMPI Scales								
Validity Scales								
L	-0.19	0.11	0.30	0.01	0.31	0.01	0.12	0.31
F	-0.18	0.13	-0.17	0.16	-0.21	0.08	-0.06	0.64
K	0.01	0.91	0.25	0.04	0.21	0.07	0.22	0.07
Clinical Scales								
Scale 1 (Hs)	-0.05	0.69	-0.25	0.04	-0.19	0.10	-0.02	0.86
Scale 2 (D)	-0.08	0.52	-0.03	0.80	-0.21	0.09	0.05	0.68
Scale 3 (Hy)	0.01	0.94	-0.02	0.89	-0.21	0.07	0.03	0.81
Scale 4 (Pd)	-0.09	0.45	-0.09	0.47	-0.11	0.38	-0.13	0.29
Scale 5 (Mf)	0.01	0.92	0.05	0.68	-0.03	0.84	-0.02	0.89
Scale 6 (Pa)	-0.14	0.25	0.05	0.72	-0.24	0.05	-0.08	0.49
Scale 7 (Pt)	0.05	0.69	-0.05	0.70	-0.23	0.06	0.05	0.66
Scale 8 (Sc)	-0.04	0.76	-0.11	0.41	-0.18	0.14	-0.02	0.87
Scale 9 (Ma)	0.11	0.39	-0.07	0.60	-0.09	0.48	-0.04	0.74
Scale 0 (Si)	-0.17	0.17	0.05	0.69	-0.12	0.34	0.12	0.33
Social Cognition Scales								
WAIS Picture Arrangement (PA)	0.08	0.48	-0.07	0.56	0.27	0.02	0.15	0.21
WAIS Comprehension (CO)	0.13	0.28	0.06	0.61	-0.04	0.75	0.04	0.72

Note: All analyses are controlled for story length. Analyses with WAIS PA controlled for Age; Component 1 and Composite controlled for ethnicity, MOA-path controlled for education; MOA; Composite controlled for ethnicity. MMPI Clinical Scales are raw (not K-corrected). Analyses with Scale 6 and 8 controlled for gender; Scale 9 controlled for age and education.

Table 16

Discriminant Function Analysis Summary

DFA Summary	Function 1	Function 2
Eigenvalues	0.42	0.07
% of Variance	85.40	14.60
R^2	0.30	0.07
Std. Canonical Discriminant Function Coefficients		
PCA Component 1- Affective	0.18	0.99
PCA Component 2- Cognitive	1.01	-0.06
Relationship Type Canonical Disc. Funct. Coefficients		
Non-problematic	1.06	-0.14
Problematic	-0.11	0.33
Violent	-0.56	-0.24

Table 17

Discriminant Function Analysis Wilks' Lambda

DFA Functions	*df*	Λ	χ^2	*p*
Functions 1-2	4	0.66	19.58	0.001
Function 2	1	0.93	3.24	0.07

Table 18

DFA: SCORS-G Components Prediction of Relationship Type

Actual Relationship Type	Predicted Relationship Type			
	Non-problematic	Problematic	Violent	Total
Non-problematic	7 (58.3%)	2 (16.7%)	3 (25.0%)	12
Problematic	2 (10.5%)	12 (63.2%)	5 (26.3%)	19
Violent	0 (0.0%)	7 (36.8%)	12 (63.2%)	19

Table 19

Discriminant Function Analysis Summary with Dimensions

DFA Summary	Function 1	Function 2
Eigenvalues	0.75	0.18
% of Variance	80.80	19.20
R^2	0.43	0.15
Std. Canonical Discriminant Function Coefficients		
COM	0.32	0.27
AFF	-0.23	-0.38
EIR	-0.32	-0.42
EIM	0.36	0.60
SC	0.86	0.15
AGG	-0.08	0.62
SE	-0.58	0.76
ICS	1.03	-0.19
Relationship Type Canonical Disc. Funct. Coefficients		
Non-problematic	1.47	-0.14
Problematic	-0.27	0.51
Violent	-0.65	-0.42

Table 20

Discriminant Function Analysis Wilks' Lambda

DFA Functions	*df*	Λ	χ^2	*p*
Functions 1-2	16	0.48	31.57	0.01
Function 2	7	0.85	7.61	0.41

Table 21

DFA: SCORS-G Dimensions Prediction of Relationship Type

Actual Relationship Type	Predicted Relationship Type			
	Non-problematic	Problematic	Violent	Total
Non-problematic	9 (75.0%)	2 (16.7%)	1 (8.3%)	12
Problematic	1 (5.3%)	12 (63.2%)	6 (31.6%)	19

Table 22

Wilcoxon Signed Rank Test

SCORS-G Dimension	R *Mdn*	*NR Mdn*	*T*	SE	Stand. *T*	*p*
COM	3.00	3.00	63.50	22.94	-0.96	0.34
AFF	3.25	3.50	46.50	21.12	-1.42	0.16
EIR	2.63	2.67	98.00	24.84	0.12	0.90
EIM	4.00	3.92	32.00	19.33	-1.86	0.06
SC	2.88	2.88	113.00	24.79	0.73	0.49
AGG	3.00	3.92	9.00	21.11	-3.20	<0.01
SE	3.88	3.92	43.00	19.32	-1.29	0.20
ICS	4.63	4.67	58.00	24.82	-1.49	0.14
Global Composite Score	3.25	3.51	148.00	24.85	2.13	0.03

Note: R *Mdn* = Median for Relationship Cards. NR *Mdn* = Median for NonRelationship Cards. *T* = Wilcoxon Test statistic. SE standard error. Stand T = Standardized *T* statistic.

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